

ADJACENT AREA APPLICATION

D-0360-8

**THE OHIO VALLEY COAL COMPANY
WASHINGTON TOWNSHIP, BELMONT COUNTY, OHIO**

Prepared For:

**Ohio Department of Natural Resources
Division of Mines & Reclamation
1855 Fountain Square Court
Columbus, Ohio 43224**

By:

**Jack A. Hamilton & Associates, Inc.
P.O. Box 471, 342 High Street
Flushing, Ohio 43977**

March, 2000



COAL MINING AND RECLAMATION PERMIT

Issued To: OHIO VALLEY COAL CO
56854 PLEASANT RIDGE ROAD
ALLEDONIA, OH 43902

Telephone: (740) 926-1351

Permit Number: D-360

Application Number: D-0360-8

Acreage: 189.1

Effective: 06/09/2000

Expires: 06/19/2009

Type of Operation: Surface, Refuse

LOCATION IS NOT AVAILABLE

The issuance of this permit means only that the application to conduct a coal mining operation meets the requirements of Chapter 1513 of the Revised Code, and as such DOES NOT RELIEVE the operator of any obligation to meet other federal, state or local requirements.

This permit is issued in accordance with and subject to the provisions, conditions, and limitations of Chapter 1513 of the Revised Code and Chapters 1501:13-1, 1501:13-3 through 1501:13-14 of the Administrative Code.

The water monitoring plan for this permit shall be:

Quality: U6-1, DS6-7

Quantity: U6-1, DS6-7

Note: These monitoring requirements are separate from NPDES monitoring requirements.

Signature:

Chief, Mineral Resources Management

Date: 06/09/2000



Bob Taft • Governor

Samuel W. Speck • Director

Division of Mines & Reclamation

Michael L. Sponsler - Chief

DATE: June 9, 2000
TO: Appropriate Governmental Agencies
FROM: Mike Sponsler, Chief
Division of Mines & Reclamation
RE: Coal Mine Permit Application # D-0360-8;
Coal Mine Permit # D-0360-8

Applicant The Ohio Valley Coal Company
56854 Pleasant Ridge Road
Alliedonia, Ohio 43902

Telephone (740) 926-1351 Date Issued 6/9/2000

Permit Location

County Belmont Township Washington
Section 30, 35, 36 Acres 189.1
Township 5 Range 4 Quadrangle Armstrong Mills
Hunter

Mine Name Refuse Pile Expansion

The Division of Mines & Reclamation has issued a coal mining and reclamation permit to the above named applicant. The permit number and date of issuance is shown above.

The approved water monitoring plan for this permit is:

Ground water and surface water will be monitored for **quality and quantity** on a **quarterly** basis for the life of the permit. In addition to current sites from the existing permit (including those required by ARP R-0360-50, approved 4/17/00), quality and quantity information will also be obtained from stream station **U6-1** in Captina Creek; spring **DS6-7**; monitoring wells **GMW 98-3S, GMW 98-4S, GMW 98-5S, GMW 99-2D, GMW 99-1S, GMW 99-3S, GMW 99-5S, and GMW 00-1D**; and the **foundation drain discharge**. Results will be reported quarterly to the Division.

F65

Mission: To ensure a balance between wise use and protection of our natural resources for the benefit of all.
1855 Fountain Square Ct., Columbus, Ohio 43224-1383 (614-265-6633)

RECYCLED PAPER

SOY-BASED

TOVCC 13876

Mark Mann
Ohio EPA-Division of Surface Water
Lazarus Government Center
PO Box 1049
Columbus, Ohio 43216-1049

Ric Queen
Ohio EPA-Division of Surface Water
Lazarus Government Center
PO Box 1049
Columbus, Ohio 43216-1049

Scott Sutliff
Ohio EPA-Drinking and Ground Water
Lazarus Government Center
PO Box 1049
Columbus, Ohio 43216-1049

Bruce Goff
Ohio EPA
Southeast District Office
2195 Front Street
Logan, Ohio 43138

Belmont County Commissioners
Couthouse
Main Street
St. Clairsville, Ohio 43950

Belmont County Planning Commission
Couthouse
Main Street
St. Clairsville, Ohio 43950

Washington Township Trustees
c/o Loretta Goddard, Clerk
46540 E. Captina Wwy.
Alledonia, Ohio 43902

Jack A. Hamilton & associates, Inc.
PO Box 471
Flushing, Ohio 43977

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION
ADJACENT AREA COAL MINING PERMIT
APPLICATION

1. Applicant THE OHIO VALLEY COAL COMPANY
Address 56854 PLEASANT RIDGE ROAD
City ALLEDONIA State OHIO Zip 43902
Telephone No. (740) 926-1351
2. Original Permit No. D-0360
3. Date Original Permit Issued JUNE 20, 1984
4. Number of adjacent area applications for the D-permit which were previously:
 - a. Submitted 7
 - b. Issued 6
5. Number of acres in this permit application. 189.1
6. Number of acres in this permit application that are to be affected during the balance of the current mining year of the original permit identified in item 2. above. 25
7. I, the undersigned, a responsible official of the applicant do, hereby verify the information in the complete permit application as true and correct to the best of my information and belief.

Printed Name JOHN FORRELLI; Date 5/7/98

Signature *John Forrelli*; Title VICE PRESIDENT

Sworn before me and subscribed in my presence this 7th day of May, 19 98.

Darryl J. Smith
Notary Public

Darryl J. Smith, Notary Public
For The State of Ohio

Commission Expires February 11, 2003
Recorded in Monroe County

8. For Revision Review Only. This item is to be completed after revisions, if any, have been made to the permit application.

I, the undersigned official of the applicant, do hereby verify and acknowledge the revisions made during the permit review process as true and correct to the best of my information and belief.

Printed Name JOHN FORRELLI; Date 05/03/99

Signature *John Forrelli*; Title VICE PRESIDENT

Sworn before me and subscribed in my presence this 3rd day of May, 19 99.


Robert K. Heil
Notary Public

Robert K. Heil, Notary Public
For The State of Ohio
My Commission Expires Oct. 25, 2001
Recorded in Belmont County

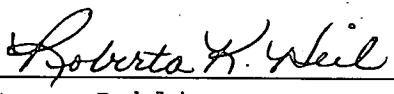
8. For Revision Review Only. This item is to be completed after revisions, if any, have been made to the permit application.

I, the undersigned official of the applicant, do hereby verify and acknowledge the revisions made during the permit review process as true and correct to the best of my information and belief.

Printed Name John R. Forrelli; Date 10/14/99

Signature ; Title Vice President

Sworn before me and subscribed in my presence this 14th day of October, 19 99.


Notary Public
ROBERTA K. HEIL, Notary Public
For The State of Ohio
My Commission Expires Oct. 25, 2001
Recorded in Belmont County

8. For Revision Review Only. This item is to be completed after revisions, if any, have been made to the permit application.

I, the undersigned official of the applicant, do hereby verify and acknowledge the revisions made during the permit review process as true and correct to the best of my information and belief.

Printed Name John Forrelli; Date 1/27/00

Signature *John R. Forrelli*; Title President and
General Manager

Sworn before me and subscribed in my presence this 27th day

of January, 2000.

Ellen M. Hopen
Notary Public

Notary Public
2001

PROOF OF PUBLICATION

The State of Ohio
County of Belmont, ss:

The undersigned, being sworn, says that he or she is an employee of Eastern Ohio Newspapers, Inc., A Corporation, publisher of the Times Leader a newspaper published in Martins Ferry, Belmont County, Ohio, each day of the week except Saturday and of general circulation in said city and county; that it is a newspaper meeting the requirements of sections 7.12 and 5721.01 Ohio Revised Code as amended effective September 24, 1957; that affiant has custody of the records and files of said newspaper; and that the advertisement of which the annexed is a true copy, was published in said newspaper on each of the days in the month and year stated, as follows:

June 2, 9, 16, 23
19 98

Audrey Blasco

Subscribed by Affiant and sworn to before me, this 23rd day of June A.D. 19 98.

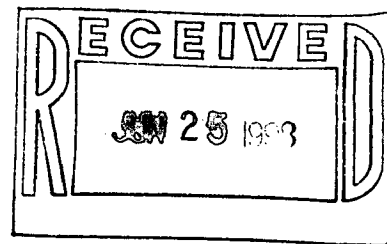
Rebecca L. Anderson
Notary Public

REBECCA L. ANDERSON
Notary Public, State of Ohio
My Commission Expires Nov. 25, 2001

Printer's Fee \$ 177.60

Notary's Fee \$ _____

The Times Leader
Martins Ferry, Ohio



PUBLIC NOTICE

THE OHIO VALLEY COAL COMPANY, 56854 PLEASANT RIDGE ROAD, ALLEDONIA, OHIO, 43902 HAS SUBMITTED AN ADJACENT AREA COAL MINING PERMIT APPLICATION NUMBERED D-0360-8 TO THE OHIO DEPARTMENT OF NATURAL RESOURCES, DIVISION OF MINING AND RECLAMATION. THE PROPOSED OPERATION WILL BE IN SECTIONS 30, 35, AND 36, T-5 R-4, WASHINGTON TOWNSHIP, BELMONT COUNTY, OHIO. THE PROPOSED PERMIT AREA ENCOMPASSES 189.1 ACRES AND IS LOCATED ON THE ARMSTRONGS MILLS AND HUNTER 7-1/2 MINUTE QUADRANGLE MAPS APPROXIMATELY 1.7 MILES NORTHWEST OF ALLEDONIA, OHIO ALONG STATE ROUTE 148.

THIS APPLICATION IS ON FILE AT THE BELMONT COUNTY COURTHOUSE, RECORDER'S OFFICE, ST. CLAIRSVILLE, OHIO 43950 FOR PUBLIC INSPECTION. WRITTEN COMMENTS, OBJECTIONS OR REQUEST FOR AN INFORMAL CONFERENCE MAY BE SENT TO THE OHIO DEPARTMENT OF NATURAL RESOURCES, DIVISION OF MINES AND RECLAMATION, 1855 FOUNTAIN SQUARE COURT, COLUMBUS, OHIO 43224, WITHIN (30) THIRTY DAYS OF THE LAST DATE OF PUBLICATION OF THIS NOTICE.

T-adv-June2-4Tues.

9. Did a person other than an employee of the applicant prepare this application? X Yes, _____ No. If "yes" provide:

Preparer's Name JACK A. HAMILTON & ASSOCIATES, INC.
Address P.O. BOX 471, 342 HIGH STREET
City FLUSHING State OHIO Zip 43977
Telephone No. (740) 968-4947

10. Provide the following information for all surface and subsurface owners of record within this proposed permit area indicating the type of ownership and permit area location information.

Name THE OHIO VALLEY COAL COMPANY
Address 56854 PLEASANT RIDGE ROAD
City ALLEDONIA State OHIO Zip 43902
Surface X Coal X Non Coal X
County BELMONT Township WASHINGTON
Section 30, 35 & 36 LOT N/A T- 5 R- 4

Name _____
Address _____
City _____ State _____ Zip _____
Surface _____ Coal _____ Non Coal _____
County _____ Township _____
Section _____ LOT _____ T- _____ R- _____

Name _____
Address _____
City _____ State _____ Zip _____
Surface _____ Coal _____ Non Coal _____
County _____ Township _____
Section _____ LOT _____ T- _____ R- _____

Name _____
Address _____
City _____ State _____ Zip _____
Surface _____ Coal _____ Non Coal _____
County _____ Township _____
Section _____ LOT _____ T- _____ R- _____

Name _____
Address _____
City _____ State _____ Zip _____
Surface _____ Coal _____ Non Coal _____
County _____ Township _____
Section _____ LOT _____ T- _____ R- _____

(If more space is required, submit an addendum identifying owners in the same format)

11. Submit any required right of entry documentation unless previously submitted and filed with the division and valid for this adjacent area application.

SEE PAGE 9, ITEM C(8)

12. In the space below, provide the name and address of the public office where a complete copy of this adjacent area permit application and the approved application for the original permit are to be filed. (Note: if previous adjacent area permits have been issued, they must also be on file.)

RECORDER'S OFFICE
BELMONT COUNTY COURTHOUSE
ST. CLAIRSVILLE, OHIO 43950

13. In the space below, list the complete name and address of the newspaper and provide the text of the advertisement that is to be published in a newspaper of general circulation in the locality of the proposed permit area once a week for four (4) consecutive weeks. The advertisement is to provide the information required by rule 1501: 13-5-01 (A)(1) of the Administrative Code.

THE TIMES LEADER
200 SOUTH FOURTH STREET
MARTINS FERRY, OHIO 43938

SEE ADDENDUM TO ITEM 13

14. Address any additional information that must be included in this adjacent area application when all items from the approved permit application have been considered.

Application items must be addressed when following situations are applicable:

a "no" response in the approved permit application becomes a "yes" when applied to the adjacent area and/or

additional information is required to make a response complete when applied to the adjacent area.

Provide the required information submitting either of the following:

- * a) the appropriate page of the permit application identifying the application items that must be included in this adjacent area application after all items from the issued permit application have been considered or
- b) an addendum specifically identifying by application page and item number any additional information that must be included in this adjacent area application after all items from the issued permit application have been considered.

Submit the revised response and any required Attachments, documents, or addenda.

*SUBMITTING ONLY THE PERMIT APPLICATION PAGES RELEVANT TO THE PROPOSED ADJACENT AREA APPLICATION. ITEMS LEFT BLANK ON SUBMITTED PERMIT PAGES WERE EITHER COVERED IN THE ORIGINAL PERMIT, SUBSEQUENT APPROVED A.R.P.'S, OR ARE NOT APPLICABLE TO THIS APPLICATION.

11/95

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION
UNDERGROUND COAL MINING AND RECLAMATION
PERMIT APPLICATION

Applicant: THE OHIO VALLEY COAL COMPANY

A. Type of Operation (check, appropriate space(s)) :*
 Shaft, Slope, Drift,
 Room and Pillar, Pillar Extraction,
 Longwall, Combined Surface and Underground

B. Type of Application (check appropriate space (s)) :*
(1) New
(2) Initial Underground Workings to Existing Permit
(3) Additional Underground Workings
***ADDITIONAL SURFACE AREA FOR COAL REFUSE DISPOSAL.**

C. Address the following if applicable:

- (1) Permit Number D-0360
(2) Date Issued JUNE 20, 1984

D. Did a person other than an employee of the applicant prepare this application? X Yes, No. If "yes," provide:

Preparer's Name JACK A. HAMILTON & ASSOCIATES, INC.
Address P.O. BOX 471, 342 HIGH STREET

City FLUSHING State OHIO Zip 43977

Telephone 740 - 968 - 4947

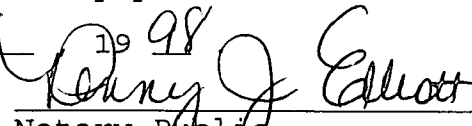
E. I, the undersigned a responsible official of the applicant do hereby verify the information in the complete permit application as true and correct to the best of my information and belief.

Printed Name JOHN FORRELLI Date 5/7/95

Signature  Title VICE PRESIDENT

Sworn before me and subscribed in my presence this

7th day of May

19 98

Notary Public

PENNY J. ELLIOTT, Notary Public
For The State of Ohio
Commission Expires February 11, 2003
Recorded in Monroe County

TOVCC 13885

- F. For Revision Review Only. This item is to be completed after revisions, if any, have been made to the permit application.

I, the undersigned, a responsible official of the applicant, do hereby verify and acknowledge the revisions made during the permit review process as true and correct to the best of my information and belief.

Printed Name JOHN FORRELLI Title VICE PRESIDENT

Signature [Signature] Date 05/03/99

Sworn before me and subscribed in my presence this
3rd day of May, 19 99

[Signature]
Notary Public

ROBERTA K. HEIL, Notary
For The State of Ohio
My Commission Expires Oct. 28
Recorded in Belmont Court

PART 1 LEGAL, FINANCIAL, COMPLIANCE, AND RELATED INFORMATION

A. IDENTIFICATION OF INTERESTS

(1) Applicant's Name THE OHIO VALLEY COAL COMPANY

Address 56854 PLEASANT RIDGE ROAD

City ALLEDONIA State OHIO Zip 43902

Telephone 740 - 926 - 1351

Employer Identification No. (EIN) 34-1041310 or

Social Security No. (SSN) _____

(2) Indicate business structure of entity and additional information:

_____ Single Proprietorship,
_____ Partnership (registration no. and date obtained)

X Corporation (charter no. and date incorporated)
384971 MAY 25, 1988

_____ Association, _____ Other, specify _____

(3) If the entity is a single proprietorship, provide the following:

Owner's Name _____

Address _____

City _____ State _____ Zip _____

Telephone _____ - _____ - _____

EIN _____, or SSN _____

Beginning date of ownership _____

- F. For Revision Review Only. This item is to be completed after revisions, if any, have been made to the permit application.


I, the undersigned, a responsible official of the applicant, do hereby verify and acknowledge the revisions made during the permit review process as true and correct to the best of my information and belief.

Printed Name John R. Forrelli Title Vice President

Signature  Date 10/14/99

Sworn before me and subscribed in my presence this


14th day of October, 19 99.


Notary Public.

ROBERTA K. HEIL, Notary Public
For The State of Ohio
My Commission Expires Oct. 25, 2001
Recorded in Belmont County

- F. For Revision Review Only. This item is to be completed after revisions, if any, have been made to the permit application.

I, the undersigned, a responsible official of the applicant, do hereby verify and acknowledge the revisions made during the permit review process as true and correct to the best of my information and belief.

Printed Name John Forrelli Title President and
General Manager
Signature  Date 1/27/00

Sworn before me and subscribed in my presence this

27th day of January, 2000.


Notary Public

Notary Public
My Comm. Expires September 23, 2001

- A. (4) If the applicant is a business entity other than a single proprietorship, provide the following for the applicant's statutory agent and submit Attachment 1.

Agent's Name _____

Address _____

City _____ State _____ Zip _____

Telephone _____

- (5) Is the operator of the mine to be a person different from the applicant? _____ Yes, _____ No. If "Yes," provide the operator's name and submit Attachment 17. (Note: if more than one operator, indicate operator's name and submit a separate attachment for each).

Operator's Name _____

- (6) Provide the following for the person who will pay the abandoned mine land reclamation fee for the applicant.

Name ROBERT E. MURRAY

Street Address SUITE 111 29525 CHAGRIN BOULEVARD

City PEPPER PIKE State OHIO Zip 44122

Telephone 740 - 926 - 1351

EIN _____ , or SSN (optional) 295-36-8852

- (7) Provide the following for all persons having the authority or ability to commit the financial, real property assets, or working resources of the applicant who are not otherwise identified as officers, directors, or owners of the applicant. If none, check box: [X]. If any person listed is a business entity and not an individual, also complete Attachment 1 for that person.

Name _____

Address _____

City _____ State _____ Zip _____

Telephone _____ - _____ - _____

EIN _____ , or SSN (optional) _____

Date O & C relationship began/ended (if applicable) _____

Submit and identify additional pages necessary to complete response.

11/92

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 1
(OWNERS AND CONTROLLERS)

Applicant's Name THE OHIO VALLEY COAL COMPANY

This attachment is to be completed and submitted with the permit application if the applicant is other than a single proprietorship. Provide the following for all partners, officers, directors, stockholders owning ten percent or more of any class of voting stock or other instruments of ownership, and any other person performing a function similar to a director. If any person listed is a business entity and not an individual, also complete an Attachment 1 for that person.

Name of business entity THE OHIO VALLEY COAL COMPANY

Name STEPHEN C. ELLIS
Street address 1100 HUNTINGTON BLDG.
City CLEVELAND State OHIO Zip 44115
EIN _____, or SSN 279-42-7396
Title of position within entity SECRETARY
Date position assumed/ended (if applicable) 5-25-88 /
Percent of ownership 0 Date of ownership _____
Location in organizational structure OFFICER

Name OHIO VALLEY RESOURCES INC.
Street address SUITE 111 29525 CHAGRIN BOULEVARD
City PEPPER PIKE State OHIO Zip 44122
EIN 34-1586391, or SSN _____
Title of position within entity CORPORATION
Date position assumed/ended (if applicable) 5-25-88 /
Percent of ownership 100 Date of ownership 5-28-88
Location in organizational structure CORPORATION

Name ROBERT E. MURRAY
Street address SUITE 111 29525 CHAGRIN BOULEVARD
City PEPPER PIKE State OHIO Zip 44122
EIN _____, or SSN 295-36-8852
Title of position within entity PRESIDENT, CEO, TREASURER
Date position assumed/ended (if applicable) 5-25-88 /
Percent of ownership 0 Date of ownership _____
Location in organizational structure OFFICER

Name MICHAEL D. LOIACONO
Street address SUITE 111 29525 CHAGRIN BOULEVARD
City PEPPER PIKE State OHIO Zip 44122
EIN _____, or SSN 206-36-6784
Title of position within entity ASST. SECY. & CORP. COMPT.
Date position assumed/ended (if applicable) 5-25-88 /
Percent of ownership 0 Date of ownership _____
Location in organizational structure OFFICER

Submit and identify additional pages necessary to complete response.

TOVCC 13890

11/92

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 1
(OWNERS AND CONTROLLERS)

Applicant's Name THE OHIO VALLEY COAL COMPANY

This attachment is to be completed and submitted with the permit application if the applicant is other than a single proprietorship. Provide the following for all partners, officers, directors, stockholders owning ten percent or more of any class of voting stock or other instruments of ownership, and any other person performing a function similar to a director. If any person listed is a business entity and not an individual, also complete an Attachment 1 for that person.

Name of business entity OHIO VALLEY RESOURCES INC.

Name MICHAEL D. LOIACONO
Street address SUITE 111 29525 CHAGRIN BOULEVARD
City PEPPER PIKE State OHIO Zip 44122
EIN _____, or SSN 206-36-6784
Title of position within entity ASST. SECY., CORP. COMPTROLLER
Date position assumed/ended (if applicable) 5-25-88 /
Percent of ownership 0 Date of ownership _____
Location in organizational structure OFFICER

Name ROBERT E. MURRAY
Street address SUITE 111 29525 CHAGRIN BOULEVARD
City PEPPER PIKE State OHIO Zip 44122
EIN _____, or SSN 295-36-8852
Title of position within entity PRESIDENT, CEO, TREASURER
Date position assumed/ended (if applicable) 5-25-88 /
Percent of ownership 100 Date of ownership 5-25-88
Location in organizational structure OFFICER

Name STEPHEN C. ELLIS
Street address 1100 HUNTINGTON BLDG.
City CLEVELAND State OHIO Zip 44115
EIN _____, or SSN 279-42-7396
Title of position within entity SECRETARY
Date position assumed/ended (if applicable) 5-25-88 /
Percent of ownership 0 Date of ownership _____
Location in organizational structure OFFICER

Name _____
Street address _____
City _____ State _____ Zip _____
EIN _____, or SSN _____
Title of position within entity _____
Date position assumed/ended (if applicable) _____
Percent of ownership _____ Date of ownership _____
Location in organizational structure _____

Submit and identify additional pages necessary to complete response.

TOVCC 13891

- (8) Provide the following for all persons owning or controlling the coal to be mined by another person under a lease, sublease, or other contract and (a) having the right to receive the coal after mining, or b) having the authority to determine the manner in which another person conducts coal mining operations. If none, check box: ☒. If any person listed is a business entity and not an individual, also complete Attachment 1 for that person.

Name _____

Address _____

City _____ State _____ Zip _____

Telephone _____ - _____ - _____

EIN _____ , or SSN _____

O & C relationship to entity _____

Date O & C relationship began/ended (if applicable)

_____/_____/_____

Submit and identify additional pages necessary to complete response.

- (9) List below the person or persons primarily responsible for ensuring that the applicant will comply with Chapter 1513. of the Revised Code and the rules adopted pursuant thereto while mining and reclaiming the area for which this permit is requested.

ROBERT E. MURRAY

- (10) Has the applicant, any person listed under items A(3), (7), and (8), or any person listed on Attachment 1 who "owned or controlled" or "owns or controls" as defined in 1501: 13-4-03(A), held a coal mining permit in the United States within the five years preceding the date of the application? X Yes, No. If "yes," submit Attachment 5. **SEE ATTACHMENT 5**
- (11) Does the applicant, any person listed under items A(3), (7), and (8), or any person listed on Attachment 1 have a pending coal mining application in any state of the United States? X Yes, No. Is "yes," submit Attachment 23. **SEE ATTACHMENT 23**
- (12) Indicate name of mine _____
- (13) List below the MSHA identification numbers for the mine and for all mine-associated structures requiring MSHA approval on the proposed permit area.
- 1210-OH8-0025-003, 1210-OH8-0025-004, 1210-OH8-0025-005
- (14) Submit Attachment 22, Certificate of Liability Insurance.

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 5
(PERMIT LISTING)

Applicant's Name THE OHIO VALLEY COAL COMPANY

Submit the following information for each coal mining operation owned or controlled by either the applicant or by any person who owns or controls the applicant.

Name of business Entity The Ohio Valley Coal Company
 Address 56854 Pleasant Ridge Road
 City Alledonia State Ohio Zip 43902
 Telephone (740) - 926 - 1351
 EIN 34-104130 or SSN _____

Permit No.	State	Regulatory Authority	MSHA No. and Date Issued
D-0360	OHIO	ODNR	33-01159 05-25-88

If not previously provided, indicate the ownership and control relationship of the business entity with the applicant, including percent of ownership and location in organizational structure:

SAME AS APPLICANT

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 5
(PERMIT LISTING)

Applicant's Name THE OHIO VALLEY COAL COMPANY

Submit the following information for each coal mining operation owned or controlled by either the applicant or by any person who owns or controls the applicant.

Name of business Entity Maple Creek Mining, Inc.

Address 29525 Chagrin Boulevard, Suite 111

City Pepper Pike State Ohio Zip 44122

Telephone (216) - 765 - 1240

EIN 25-1755305 or SSN _____

Permit No.	State	Regulatory Authority	MSHA No. and Date Issued
63841302	PA	DEP	
63733706	PA	DEP	
63723707	PA	DEP	

If not previously provided, indicate the ownership and control relationship of the business entity with the applicant, including percent of ownership and location in organizational structure:

ROBERT E. MURRAY - PRESIDENT AND CHIEF EXECUTIVE OFFICER, DIRECTOR

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 5
(PERMIT LISTING)

Applicant's Name THE OHIO VALLEY COAL COMPANY

Submit the following information for each coal mining operation owned or controlled by either the applicant or by any person who owns or controls the applicant.

Name of business Entity The American Coal Company
 Address 29525 Chagrin Boulevard, Suite 111
 City Pepper Pike State Ohio Zip 44122
 Telephone (216) - 765 - 1240
 EIN 73-1543124 or SSN _____

Permit No.	State	Regulatory Authority	MSHA No. / Date Issued
02	IL	OFFICE OF MINES & MINERALS	11-02752 10/14/98
255	IL	OFFICE OF MINES & MINERALS	11-02752 10/14/98
257	IL	OFFICE OF MINES & MINERALS	11-02752 10/14/98
306	IL	OFFICE OF MINES & MINERALS	11-02752 10/14/98

If not previously provided, indicate the ownership and control relationship of the business entity with the applicant, including percent of ownership and location in organizational structure:

ROBERT E. MURRAY - DIRECTOR

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 5
(PERMIT LISTING)

Applicant's Name THE OHIO VALLEY COAL COMPANY

Submit the following information for each coal mining operation owned or controlled by either the applicant or by any person who owns or controls the applicant.

Name of business Entity Belmont Coal, Inc.
Address Box 156, 30799 Pinetree Road
City Pepper Pike State Ohio Zip 44124
Telephone (216) - 765 - 2653
EIN 31-1536602 or SSN _____

Permit No.	State	Regulatory Authority	MSHA No./ Date Issued
D-1020	OH	ODNR	33-04397 7-31-97
D-0241	OH	ODNR	33-03048 7-2-93

If not previously provided, indicate the ownership and control relationship of the business entity with the applicant, including percent of ownership and location in organizational structure:

ROBERT E. MURRAY - SHAREHOLDER 100%

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 5
(PERMIT LISTING)

Applicant's Name THE OHIO VALLEY COAL COMPANY

Submit the following information for each coal mining operation owned or controlled by either the applicant or by any person who owns or controls the applicant.

Name of business Entity UMCO Energy, Inc.
Address 29525 Chagrin Boulevard, Suite 111
City Pepper Pike State Ohio Zip 44122
Telephone (216) - 765 - 1240
EIN 52-1615668 or SSN _____

Permit No.	State	Regulatory Authority	MSHA No. and Date Issued
63921301	PA	DEP	
9-00414	PA	DEP	
63723707	PA	DEP	

If not previously provided, indicate the ownership and control relationship of the business entity with the applicant, including percent of ownership and location in organizational structure:

ROBERT E. MURRAY - PRESIDENT AND CHIEF EXECUTIVE OFFICER, DIRECTOR

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 5
(PERMIT LISTING)

Applicant's Name THE OHIO VALLEY COAL COMPANY

Submit the following information for each coal mining operation owned or controlled by either the applicant or by any person who owns or controls the applicant.

Name of business Entity Utah American Energy, Inc.

Address 30799 Pinetree Road #139

City Pepper Pike State Ohio Zip 44124

Telephone (435) - 613 - 0393

EIN 34-1874726 or SSN _____

Permit No.	State	Regulatory Authority	MSHA No. and Date Issued
ACT/007/013	UT	DOGM	

If not previously provided, indicate the ownership and control relationship of the business entity with the applicant, including percent of ownership and location in organizational structure:

ROBERT E. MURRAY - DIRECTOR

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 5
(PERMIT LISTING)

Applicant's Name THE OHIO VALLEY COAL COMPANY

Submit the following information for each coal mining operation owned or controlled by either the applicant or by any person who owns or controls the applicant.

Name of business Entity The Oklahoma Coal Company
 Address 29525 Chagrin Bldv., Suite 111
 City Pepper Pike State Ohio Zip 44122
 Telephone (216) - 765 - 1240
 EIN 34-1673480 or SSN _____

Permit No.	State	Regulatory Authority	MSHA No. and Date Issued
D-0230	OH	ODNR	

If not previously provided, indicate the ownership and control relationship of the business entity with the applicant, including percent of ownership and location in organizational structure:

ROBERT E. MURRAY - DIRECTOR

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 5
(PERMIT LISTING)

Applicant's Name THE OHIO VALLEY COAL COMPANY

Submit the following information for each coal mining operation owned or controlled by either the applicant or by any person who owns or controls the applicant.

Name of business Entity MonValley Transportation Center, Inc.

Address P.O. Box 135, 1060 Ohio Avenue

City Glassport State PA Zip 15045

Telephone (412) - 673 - 1500

EIN 15-1490495 or SSN _____

Permit No.	State	Regulatory Authority	MSHA No. and Date Issued
0285160Z	PA	DEP	

If not previously provided, indicate the ownership and control relationship of the business entity with the applicant, including percent of ownership and location in organizational structure:

ROBERT E. MURRAY - DIRECTOR

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 23
(PENDING PERMIT APPLICATIONS)Applicant's Name THE OHIO VALLEY COAL COMPANY

This attachment is to be completed and submitted with the permit application if the response to item A. (14) in part 1 of the permit application is "yes".

Indicate the business entity for which this listing has been completed The American Coal Company

Application No.	Name of Regulatory Agency	State
Permit 02 - Rev.08	OFFICE OF MINES & MINERALS	IL

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 23
(PENDING PERMIT APPLICATIONS)Applicant's Name THE OHIO VALLEY COAL COMPANY

This attachment is to be completed and submitted with the permit application if the response to item A. (14) in part 1 of the permit application is "yes".

Indicate the business entity for which this listing has been completed The Ohio Valley Coal Company

Application No.	Name of Regulatory Agency	State
D-0360-8	O.D.N.R.	OHIO
D-0360-9	O.D.N.R.	OHIO

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 23
(PENDING PERMIT APPLICATIONS)Applicant's Name THE OHIO VALLEY COAL COMPANY

This attachment is to be completed and submitted with the permit application if the response to item A. (14) in part 1 of the permit application is "yes".

Indicate the business entity for which this listing has been completed Belmont Coal, Inc.

Application No.	Name of Regulatory Agency	State
1436	O.D.N.R.	OH
1473	O.D.N.R.	OH

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 22
(CERTIFICATE OF LIABILITY INSURANCE)Name of Insured The Ohio Valley Coal Company

This is to certify that the policy of insurance listed below has been issued to the above named insured and is in force at this time. The policy provides bodily injury and property damage insurance for all coal mining and reclamation operations of the insured in the State of Ohio as required by paragraph (B) of rule 1501:13-7-07 of the Administrative Code stated below.

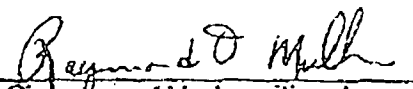
Name of Insurer Federal Insurance Company
Policy Number 37104410
Policy Period 6/1/99 - 6/1/2000
Name of Underwriting Agent Raymond O. Mullen
Address of Underwriting Agent 922 Philadelphia Street, Indiana, PA 15701
Telephone Number of Underwriting Agent (724) 349 - 1300

In the event of cancellation or non-renewal of this policy, including non-payment of policy premiums, the insurer agrees to promptly notify:

The Division of Reclamation
Foundation Square
Columbus, OH 43224

5/28/99

Date


Signature of Underwriting Agent

This certificate is issued as a matter of information only and confers no rights upon the Division of Reclamation. This certificate does not amend, extend, or alter the coverage afforded by the policy listed above.

1501:13-7-07(B) The Public Liability Insurance Policy shall:

- 1.) Be in effect during the term of the permit or any renewal, including the length of all reclamation operations;
- 2.) Provide for personal injury and property damage protection in amounts adequate to compensate any persons injured or property damaged as a result of coal mining and reclamation operations, including the use of explosives. The minimum insurance coverage for bodily injury and property damage shall be three hundred thousand dollars for each occurrence and five hundred thousand dollars in the aggregate; and
- 3.) Include a rider requiring that the insurer notify the Chief whenever substantive changes are made in the policy, including any termination or failure to renew.

B. COMPLIANCE INFORMATION

- (1) Has the applicant, any subsidiary, affiliate, or persons controlled by or under common control with the applicant:
- (a) Had a federal or state coal mining permit suspended or revoked in the five years preceding the date of submission of this application?
____ Yes, X No. If "yes," submit Attachment 6.
- (b) Forfeited a mining bond or similar security deposited in lieu of bond? ____ Yes, X No.
If "yes," submit Attachment 6.
- (2) Has the applicant been issued a notice of violation (NOV) in connection with any coal mining and reclamation operation during the three years preceding the date of submission of this application for violations of Chapter 1513. of the Revised Code or these rules, or of any federal or state law, rule, or regulation pertaining to air or water environmental protection? X Yes, ____ No. If "yes," submit Attachment 7A.
- (3) Have any unabated federal or state cessation orders (Cos) and unabated air and water quality notices of violation (NOV's) been received prior to the submission date of this application by any coal mining and reclamation operation owned or controlled by either the applicant or by any person who owns or controls the applicant. ____ Yes, X No. If "yes," submit Attachment 7B.

11/92

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 7A
(NOTICES OF VIOLATION)

Applicant's Name THE OHIO VALLEY COAL COMPANY

Permit No.	Violation Number	Date of Issuance	Issuing Agency	State	Brief Description of N.O.V.	Action Taken to Abate N.O.V.	Current Status of N.O.V. (*)
D-0360	21173	4-23-99	O.D.N.R.	OHIO	FAILURE TO FOLLOW APPROVED MINING PLAN	DESIGNING ADJACENT FILL TO FILL VALLEY, NEGOTIATING WITH LANDOWNER	MUST BE EXTENDED
D-0360	25510	5-05-99	O.D.N.R.	OHIO	EXTENSION OF DECANT PIPE, INSTALLATION OF UNDERDRAINS	SUBMITTED D-0360-8 NECESSARY	AWAITING APPROVAL OF D-0360-8

(*) If administrative or judicial proceedings have been initiated concerning any of the violations, identify the violation and provide an addendum indicating the date, location, type of proceeding, and current status.

C. RIGHT OF ENTRY INFORMATION

- (1) (a) Provide the following information for every legal or equitable owner of record, surface and mineral, of the property to be mined on the permit area (i.e. areas affected by surface operations and facilities), indicating whether the ownership is of surface, coal, or noncoal mineral.

Name THE OHIO VALLEY COAL COMPANY
Address 56854 PLEASANT RIDGE ROAD
City ALLEDONIA State OHIO Zip 43902
Surface X , Coal X , Noncoal X
Deed Parcel No. _____

Name _____
Address _____
City _____ State _____ Zip _____
Surface _____ , Coal _____ , Noncoal _____
Deed Parcel No. _____

Name _____
Address _____
City _____ State _____ Zip _____
Surface _____ , Coal _____ , Noncoal _____
Deed Parcel No. _____

Name _____
Address _____
City _____ State _____ Zip _____
Surface _____ , Coal _____ , Noncoal _____
Deed Parcel No. _____

- C. (2) Provide the following information for the holders of record of any leasehold interest in the coal to be mined or property to be affected by surface operations or facilities, indicating whether the held interest is of surface, coal, or noncoal rights.

Name N/A

Address _____

City _____ State _____ Zip _____

Surface _____ , Coal _____ , Noncoal _____

Name _____

Address _____

City _____ State _____ Zip _____

Surface _____ , Coal _____ , Noncoal _____

Submit and identify additional pages necessary to complete response.

- (3) Are there purchasers of record under a real estate contract of the coal to be mined or property to be affected by surface operations and facilities?
_____ Yes, _____ No. If "yes," submit Attachment 2.
- (4) Is any owner, holder, or purchaser listed in items C(1) (a and b), (2), or (3) respectively, a business entity other than a single proprietorship?
X Yes, _____ No. If "yes," submit Attachment 3.

SEE ATTACHMENT 3

- (5) Is any part of the proposed permit area adjacent to any lands which are not owned by those persons identified in item C(1) (a)? X Yes, _____ No. If "yes," submit Attachment 4.
- (6) Does the applicant hold lands, interests in lands, options, or pending bids on interests in lands which are contiguous to the property to be mined?
X Yes, _____ No. If "yes," provide a description of the lands.

SEE ADDENDUM TO PART 1, PAGE 8, ITEM C(6)

- (7) Is it anticipated that individual mining permits will be sought for any of those lands described in item C(6) above? _____ Yes, X No. If "yes," submit as an addendum and identify those lands to include the size, sequence, and timing of future mining permits, utilizing a map pursuant to 1501:13-4-13(J)(29), Ohio Administrative Code.

11/92

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 3
(IDENTIFICATION OF OTHER BUSINESS ENTITIES)

Applicant's Name THE OHIO VALLEY COAL COMPANY

This attachment is to be completed and submitted with the permit application if the response to item C. (4) in Part 1 of the permit application is "yes." A separate attachment is to be submitted for each business entity.

Name of business entity THE OHIO VALLEY COAL COMPANY

Statutory agent A & H STATUTORY

Street Address 1100 HUNTINGTON BUILDING

City CLEVELAND State OHIO Zip 43115

Person's Name STEPHAN C. ELLIS Position SECRETARY

Street Address 1100 HUNTINGTON BUILDING

City CLEVELAND State OHIO Zip 44115

Person's Name ROBERT MURRAY Position PRESIDENT, CEO
TREASURER

Street Address SUITE 111, 29525 CHAGRIN BOULEVARD

City PEPPER PIKE State OHIO Zip 44122

Person's Name MICHAEL D. LOIACONO Position ASST. SECY. & CORP. COMP

Street Address SUITE 111, 29525 CHAGRIN BOULEVARD

City PEPPER PIKE State OHIO Zip 44122

Person's Name _____ Position _____

Street Address _____

City _____ State _____ Zip _____

11/92

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 4
(ADJACENT OWNERS)

Applicant's Name THE OHIO VALLEY COAL COMPANY

This attachment is to be completed and submitted with the permit application if the response to item C.(5) in Part 1 of the permit application is "yes".

Name of owner GARY REED

Address 7834 NORTH WALNUT STREET EXT. S.E.

City GNADENHUTTEN State OHIO Zip 44629

X Surface, X Mineral (DOES NOT INCLUDE COAL)

Name of owner R & F COAL COMPANY

Address 538 NORTH MAIN STREET

City CADIZ State OHIO Zip 43907

X Surface, X Mineral

Name of owner _____

Address _____

City _____ State _____ Zip _____

_____ Surface, _____ Mineral

Name of owner _____

Address _____

City _____ State _____ Zip _____

_____ Surface, _____ Mineral

Name of owner _____

Address _____

City _____ State _____ Zip _____

_____ Surface, _____ Mineral

ADDENDUM TO PART 1, ITEM C(6)
THE OHIO VALLEY COAL COMPANY

THE OHIO VALLEY COAL COMPANY HOLDS INTERESTS IN LANDS WHICH ARE
CONTIGUOUS TO THE PROPOSED ADJACENT PERMIT AREA. THESE LANDS ARE
LOCATED TO THE NORTH, EAST, AND WEST IN SECTIONS 30, 35 AND 36,
WASHINGTON TOWNSHIP, BELMONT COUNTY, OHIO.

C. (8) (a) Provide either of the following to allow for coal mining operations on the permit area.

- (i) A copy of the documents, or
- (ii) An affidavit wherein the documents are described.

AFFIDAVIT

State of Ohio, BELMONT County, ss. JOHN FORRELLI being first duly sworn, says that the following described documents convey to the applicant the legal right explained below and is a subject of litigation as shown below.

Type of document DEED

Execution Date MAY 25, 1988

Expiration Date NONE

Parties: From NACCO MINING CO. To THE OHIO VALLEY COAL CO.

Description of land: No. Acres 618.9027

County BELMONT Township WASHINGTON

Sections 30, 35 & 36 Lots _____

Parcel # _____

Explanation of legal rights claimed ALL RIGHTS OF OWNERSHIP

Pending litigation _____ Yes, X No.

[Signature]
Signature of Affiant

5/7/98
Date

VICE PRESIDENT
Position

Sworn to before me and subscribed in my presence this

7th day of May, 19 98.

[Signature]
Notary Public

PENNY J. ELLIOTT, Notary Public
For The State of Ohio
Commission Expires February 11, 2003
Recorded in Monroe County

C. (9) (a) List below the following information for each surface owner of land within the proposed permit area.

[illegible]

D. AREAS WHERE MINING IS PROHIBITED OR LIMITED Permit Area

- (1) Does the permit area included in this permit application include any area dedicated as a nature preserve pursuant to Chapter 1517., Ohio Revised Code? Yes, X No. If "yes," submit proof of valid existing right.
- (2) Does the permit area included in this permit application include any area within one-thousand feet of the waterlines of any wild, scenic, or recreational river dedicated pursuant to Chapter 1501., Ohio Revised Code? Yes, X No. If "yes," submit proof of valid existing right.
- (3) Does the permit area included in this permit application include any area within the boundaries of the following systems: national park, national wildlife refuge, national trails, national wilderness preservation, national recreational areas, or wild and scenic rivers or river corridors, including those rivers under study? Yes, X No. If "yes," submit proof of valid existing right.
- (4) Does the permit area included in this permit application include any federal lands within the boundaries of any national forest? Yes, X No. If "yes," submit approval of U.S. Secretary of Interior or proof of valid existing right.
- (5) Will operations in the permit area conducted under this permit adversely affect any publicly owned park or places listed on the National Register of Historic Places? Yes, No. If "yes," submit joint approval from the chief and the federal, state, or local agency with jurisdiction over the park or places or proof of valid existing right.
- (6) Will operations in the permit area conducted under this permit affect land within one hundred feet of the outside right-of-way of a public highway? Yes, No. If "yes," list the highway(s) in the space below and submit Attachment 9 or proof of valid existing right.

- D. (7) Will operations in the permit area conducted under this permit affect land within three hundred feet of any occupied dwelling? _____ Yes, _____ No. If "yes," list the name of the owner(s) in the space below and submit Attachment 10 or proof of valid existing right.
- (8) Will operations in the permit area conducted under this permit, affect land within three hundred feet of any public building, school, church, community or institutional building, or public park?
_____ Yes, X No. If "yes," submit proof of valid existing right.
- (9) Will operations in the permit area conducted under this permit, affect land within one hundred feet of a cemetery? _____ Yes, X No. If "yes," submit proof of valid existing right or appropriate authorization to relocate the cemetery.
- (10) Will operations conducted during this permit result in the extension of any part of the pit within fifty feet of horizontal distance to any adjacent land or water in which the applicant does not own either the surface or mineral rights? _____ Yes, _____ No. If "yes," list below the names of the adjacent owners and submit Attachment 11.

E. Areas Where Mining is Prohibited or Limited-Permit And Shadow Area

Are there areas within the proposed permit area, shadow area, or adjacent areas designated unsuitable for coal mining operations under rule 1501:13-3-07 of the Administrative Code or under study for designation in an administrative proceeding under this rule?

_____ Yes, X No.

- (1) If "yes" to the item above, did the applicant make substantial legal and financial commitments in the proposed areas prior to January 4, 1977?
_____ Yes, _____ No.
- (2) If "yes" to item (1) above, submit as an addendum to the permit application information supporting the assertions that the commitments were made prior to January 4, 1977.

F. PERMIT TERM AND EXTENT-Permit and Underground Workings

- (1) Anticipated/actual date for:
 - (a) Starting mining operations UPON PERMIT ISSUANCE
 - (b) Terminating mining operations TO EXHAUSTION OF
COAL RESERVES
- (2) Does the applicant propose a permit term in excess of five (5) years? _____ Yes, X No. If "yes," submit an addendum with the information required by 1501:13-4-03 (E) (3), Ohio Administrative Code.
- (3) Indicate the following acreage figures:
 - (a) Total Acres 189.1 (Permit Area)
 - (b) Total Acres 0* (Underground Workings)
- (4) Horizontal extent of underground workings over life of permit in acres:
 - (a) Full Coal Recovery N/A*
 - (b) Room and Pillar N/A*

G. PUBLIC NOTICE-Permit and Shadow Area

- (1) In the space below, provide the name and address of the public office where a complete copy of this permit application is to be filed.

SEE PAGE 3 OF ADJACENT AREA APPLICATION ITEM 12

- (2) In the space below, list the name and address of the newspaper and submit an addendum providing the text of the advertisement that is to be published in a newspaper of general circulation in the locality of the proposed operation. Note: the advertisement is to provide the information required by paragraph (A) of rule 1501:13-5-01 of the Administrative Code.

SEE PAGE 3 ADJACENT AREA APPLICATION ITEM 13

* N/A, SURFACE DISTURBANCE FOR REFUSE DISPOSAL ONLY

PART 2 ENVIRONMENTAL RESOURCES INFORMATION

A. CULTURAL, HISTORIC, AND ARCHEOLOGICAL INFORMATION-Permit and Planned Subsidence Area

- (1) Are there any cultural or historic resources or structures listed or eligible for listing on the National Register of Historic Places within the proposed permit or planned subsidence area? _____ Yes, X No. If "yes," submit an addendum describing the resources and structures including the location and submit Attachment 27 or 27A as appropriate.
- (2) Are there any known archeological sites within the proposed permit or planned subsidence area? _____ Yes, X No. If "yes," submit an addendum describing the site including the location and submit Attachment 27 or 27A as appropriate.
- (3) If applicable, based upon the review of the proposed planned subsidence areas and the completed Attachment 27A for the initial six months of projected mining, have any properties listed or eligible for listing on the National Register of Historic Places been identified? _____ Yes, _____ No. If "yes," submit an addendum listing each property identified. N/A
- (4) Submit an addendum indicating the method to be used to identify historic properties on planned subsidence areas as mining progresses. N/A

B. GEOLOGY DESCRIPTION-Permit and Shadow Area

- (1) Submit an addendum describing the geology within the proposed permit area and shadow area down to and including the first stratum below the lowest coal seam to be mined or any aquifer below the lowest coal seam to be mined which may be adversely affected by mining. The description shall also include information on the areal and structural geology of the permit and shadow area and any other geologic parameters which may influence the probable hydrologic consequences and protection of the hydrologic balance from material damage outside of the permit area.

SEE P.T.I., ENGINEERING REPORT, PART 4.1

- (2) Submit an addendum describing how the areal and structural geology may affect the occurrence, availability, movement, quantity, and quality of potentially affected surface and ground waters per paragraph (C) of rule 1501:13-4-13 of the Administrative Code.

SEE P.T.I., ENGINEERING REPORT, PART 7.0

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

SURFACE MINING OPERATIONS
ATTACHMENT 27
(HISTORIC AND PREHISTORIC PROPERTIES)

1. Applicant's Name: THE OHIO VALLEY COAL COMPANY

Address 56854 PLEASANT RIDGE ROAD

City ALLEDONIA State OHIO Zip 43902

2. Contact Person JACK A. HAMILTON Phone 740-968-4947

3. Location and Acreage Information

County BELMONT Township WASHINGTON

Section(s)/Lot(s) 30, 35 & 36 T- 5 R- 4

USGS Quadrangle ARMSTRONGS MILLS & HUNTER Acreage 189.1

4. Application Map Attached: (area described in 3. above is to
be outlined on the map)

5. Previous Disturbance:

 present; X absent within permit area only
(Note: previous disturbance is any type of natural or human made
disturbance to the topsoil and subsoil in the permit area prior
to permit application. Examples include but are not limited to,
slides, severe erosion, previous mining activities, clear cut
logging, recreational activities, etc., but not agricultural
plowing and disking.)

If previous disturbance is present, list below and clearly
delineate the extent of each type of disturbance on the
application map to be sent to the SHPO by the Division. Attach
addendum, if necessary.

Type of Disturbance	Date Occurred	Percent of Permit Area	Map Symbol

6. Current Land Use: (describe land use and percent of land in that use)

Agricultural:

Residential:

Mining:

Pasture: 17%

Secondary Forest Growth:

Has area been clear cut logged? Yes _____, No X.

If "yes", indicate approximate date(s) of logging _____.

Other: UNDEVELOPED: 83%

7. Historic and Prehistoric Structures:

Definitions

A historic or prehistoric structure is a work made up of interdependent and interrelated parts in a definite pattern of organization. Constructed by humans, and 50 years or older, it is usually an engineering project.

Types

Historic structures include, but are not limited to dwellings, buildings, barns, farmstead outbuildings, bridges, culverts, churches, schools, halls, iron furnaces (and associated buildings), canals, forts, abandoned coal mine buildings, mine entrances, tipples and related structures, etc.

Prehistoric structures include, but are not limited to, earthworks, mounds, rockshelters, etc.

List all known historic and prehistoric structures below and locate each one on the application map to be sent to the SHPO including corresponding labeled black and white, front and rear photographs of each structure. Attach addendum, if necessary.

Structure Type	Construction Date	Map Reference	Photo # Front	Photo # Rear
-------------------	----------------------	------------------	------------------	-----------------

NONE

8. Previous Historic and/or Archeological Surveys: (describe any surveys known to applicant on the permit or adjacent areas)

Permit area:

Adjacent areas:

9. SHPO please send this form to:

Dr. Jeffrey C. Reichwein
Division of Reclamation
1855 Fountain Square Ct.
Columbus, Ohio 43224

FOR USE BY THE STATE HISTORIC PRESERVATION OFFICE ONLY

- A. (check the appropriate space)

_____ This is a recommendation for an archeological survey of the proposed permit area based on the following reasons (attach addendum, if necessary):

A SHPO review of the area shown on the application map has provided a listing below of all known historic and prehistoric properties listed and eligible for listing on the "National Register of Historic Places" and known historic and prehistoric sites on the permit and adjacent areas (in a 1.5 mile radius). The listing includes, when appropriate, those historic and prehistoric structures identified by the applicant in items 7. and 8. above.

Listed and Eligible National Register Sites

<u>Site Name (#)</u>	<u>Type</u>	<u>Proposed Area</u>	<u>Adjacent Area</u>
----------------------	-------------	----------------------	----------------------

Known Historic and Prehistoric Sites

<u>Site Name (#)</u>	<u>Type</u>	<u>Proposed Area</u>	<u>Adjacent Area</u>
----------------------	-------------	----------------------	----------------------

- B. _____ A SHPO review of the area shown on the application map and information contained in this attachment finds that the proposed mining does not have a reasonable probability of affecting any properties listed or eligible for listing on the "National Register of Historic Places." Therefore, no further coordination will be necessary with this office unless the scope of the proposed application area changes.

State Historic Preservation Officer _____

SHPO # _____

Date _____

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 14B
(GROUND WATER HYDROLOGY DESCRIPTION)

Applicant's Name THE OHIO VALLEY COAL COMPANY (PERKINS RUN)
ADJACENT AREA

Aquifer/Zone Identification	Aquifer/Zone Lithology	Aquifer/Zone Thickness	Aquifer/Zone Elev. (msl)	Aquifer/Zone Horizontal Extent	Aquifer/Zone Known Uses	Approx. Rate of *Discharge/Usage of Aquifer/Zone (gpm or cfs)
A	SANDSTONE, WASHINGTON "A" COAL	36'	1245' TO 1209'	UPPER MOST RIDGE OUTCROP TO OUTCROP	W6-5, W6-6, DW6-4	DOMESTIC DW6-4 - NONE
B	SHALE	20'	1190' TO 1170'	UPPER RIDGE OUTCROP TO OUTCROP	S6-10, S6-16, S6-17, S6-18 S6-15, S6-5	NONE 20.3 GPM
C	SANDSTONE, SHALE, TRACE OF COAL, LIMESTONE	15'	1124' TO 1109'	UPPER RIDGE OUTCROP TO OUTCROP	DS6-7, S6-11	DOMESTIC - 5.9 GPM NONE - 15 GPM
D	WASHINGTON #12 COAL, SHALE	8'	1093' TO 1085'	MID - RIDGE OUTCROP TO OUTCROP	S6-14	NONE 7 GPM
E	SILTSTONE/SHALE, SANDSTONE, WAYNESBURG "A" COAL	21'	1044.5' TO 1023.5'	LOWER RIDGE OUTCROP TO OUTCROP	DS6-6, S6-13	NONE 5 GPM
F	WAYNESBURG #11 COAL, SILTSTONE/SANDSTONE	32'	985' TO 953'	BASE OF RIDGE OUTCROP TO OUTCROP	S6-19, S6-21, S6-22, DS6-12 S6-20, (TP-9)	NONE 8.2 GPM

* INDICATES HIGHEST FLOW DURING CONSECUTIVE 6 MONTH MEASUREMENT PERIOD.

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 14B
(GROUND WATER HYDROLOGY DESCRIPTION)

Applicant's Name THE OHIO VALLEY COAL COMPANY (PERKINS RUN)
ADJACENT AREA

Aquifer/Zone Identification	Aquifer/Zone Lithology	Aquifer/Zone Thickness	Aquifer/Zone Elev. (msl)	Aquifer/Zone Horizontal Extent	Aquifer/Zone Known Uses	Approx. Rate of Discharge/Usage of Aquifer/Zone (gpm or cfs)
* FF	SILTSTONE, CLAYSTONE	25.8'	918.6 TO 892.8	BASE OF RIDGE	NO KNOWN USES	UNKNOWN
** G	SANDSTONE, CLAY SHALE, SILTSTONE	6'	880' TO 874'	BASE OF RIDGE OUTCROP TO OUTCROP	NO KNOWN USES	UNKNOWN
*** H	SHALE/LIMESTONE, SEMICKLEY #9 COAL	16'	828' TO 813'	VALLEY FLOOR REGIONAL	NO KNOWN USES	UNKNOWN

* INDICATED BY TEST PITS 5, 6, 7, AND 8

** INDICATED BY TEST PIT 2 AND MONITORING WELL GW98-4S; FIRST SIGNIFICANT ZONE OF SATURATION UNDERLYING FACILITY

*** INDICATED BY MONITORING WELL GW98-4D.

- B. (3) For those areas to be affected by underground mining surface operations where removal of the overburden down to the level of the coal seam will occur, submit Attachment 12(s) as required by paragraphs (C)(2)(a) and (c) of rule 1501:13-4-13 of the Administrative Code. N/A
- (4) For those areas within the shadow area where the stratum above the coal seam to be mined will not be removed, submit Attachment 13(s) as required by paragraphs (C)(2)(d) and (e) of rule 1501:13-4-13 of the Administrative Code. N/A
- C. GROUND WATER INFORMATION-Permit, Shadow Area, and Adjacent Area
- (1) Submit an Attachment 14B which describes the ground water hydrology of the proposed permit area, shadow area, and adjacent area. The Attachment 14B is to include information on each waterbearing stratum or zone as required by paragraph (D) of rule 1501:13-4-13 of the Administrative Code, including the first waterbearing stratum below the coal to be mined.
- SEE P.T.I., ENGINEERING REPORT, PAGE 15, ITEM 7.3, ATTACHMENT 14B, AND ADDENDUM TO PART 2, ITEM C(1).
- (2) Are there any wells on the proposed permit area, shadow area, and adjacent areas? X Yes, No. If "yes," submit Attachment 14C.
- (3) Are there any springs on the proposed permit area, or developed springs on the shadow area and adjacent area? X Yes, No. If "yes," submit Attachment 14C.
- (4) Are there any public water supply sources on the proposed permit area, shadow area, and adjacent area? Yes, X No. If "yes," submit Attachment 14A, Attachment 14D, and show location on the hydrology map.
- (5) Submit Attachment 14A for representative wells and developed springs as required by paragraph (D)(4) of rule 1501:13-4-13. Based on this data identify the seasonal variations of ground water quality and quantity.
- D. SURFACE WATER INFORMATION-Permit, Shadow Area, and Adjacent Area

- (1) List the name of the watershed that will receive water discharges from the proposed permit, shadow, and adjacent areas as listed in the "Gazetteer of Ohio Streams" published by the Ohio Department of Natural Resources.

CAPTINA CREEK

- (2) Are there any perennial or intermittent streams or other surface water bodies on the proposed permit, shadow area, and adjacent area? X Yes, No. If "yes," submit Attachment 14A and Attachment 14D and show location on application and hydrology map.



George V. Voinovich • Governor
Donald C. Anderson • Director

DATE December 3, 1998

ANALYSIS OF EXISTING GROUND WATER FILE DATA

PREPARED BY: Bill Haiker *BH*, HYDROGEOLOGIST

OPERATOR: Ohio Valley Coal Company

COUNTY: Belmont

TOWNSHIP: Washington

SECTION (S): 28, 29, 30, 34, 35 and 36

NUMBER OF WATER WELL LOGS WITHIN 2,000 FOOT RADIUS OF SITE (COPIES ATTACHED) 0: FIELD LOCATED: 0

GENERAL DESCRIPTION OF LOCAL HYDROLOGY:
(Use additional sheet if necessary)

Although there are no water well logs on file within the permit boundary, ground water is obtained from interbedded shale, limestone and sandstone bedrock. Wells range from 60 to 150 feet deep with sustainable yields of less than 2 gallons per minute.

AREAS OF PARTICULAR CONCERN:
(Use additional sheet if necessary)

Any wells that may exist within the permit boundary should be located and monitored for quality changes.

APR-28-98 13:35 FROM: OVCC FRONT DESK

ID: B149289112

PAGE 4/10

WELL LOG AND DRILLING REPORT

ORIGINAL

NO CARBON PAPER
NECESSARY -
SELF-TRANSCRIBINGState of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Fountain Square
Columbus, Ohio 43224

504859

COUNTY BEAUMONT TOWNSHIP WASHINGTON SECTION OF TOWNSHIP _____
OWNER REX GOODARD ADDRESS Rt. 1 Alledonia, O
LOCATION OF PROPERTY 1/4 mi. off St. Rt 145 on Twp Rd 109

CONSTRUCTION DETAILS

Casing diameter 8" Length of casing 26'
Type of screen _____ Length of screen _____
Type of pump _____
Capacity of pump _____
Depth of pump setting _____
Date of completion _____

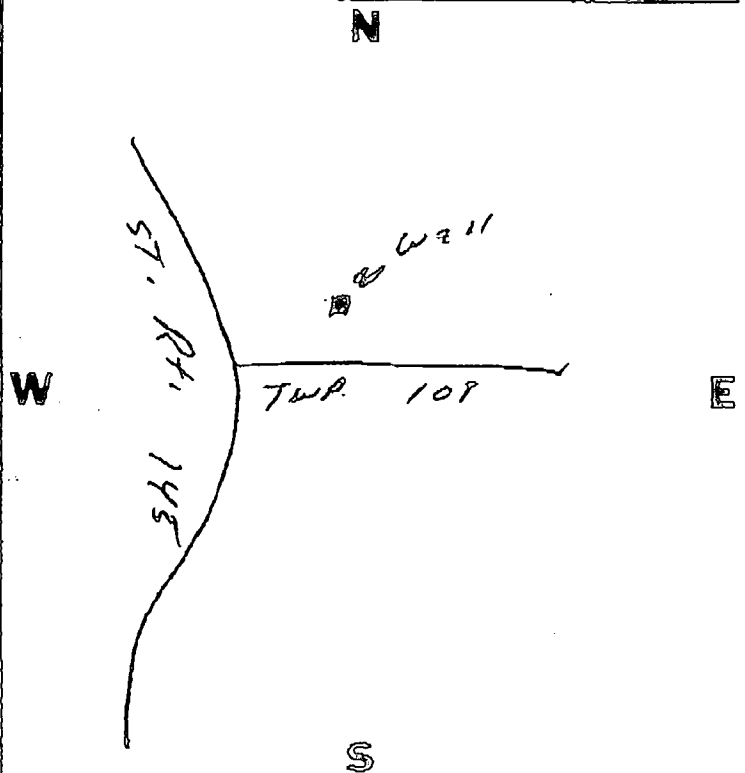
BAILING OR PUMPING TEST

(Specify one by circling)

Test rate 1/2 gpm Duration of test 24 hrs
Drawdown _____ ft Date _____
Static level (depth to water) _____ ft
Quality (clear, cloudy, taste, odor) CLEAR
NO ODOOR
Pump installed by _____WELL LOG^o

Formations: sandstone, shale, limestone, gravel, clay	From	To
<u>TOP</u>	<u>0 ft</u>	<u>6 ft</u>
<u>Limestone</u>	<u>6</u>	<u>15</u>
<u>Sandstone</u>	<u>15</u>	<u>16</u>
<u>Limestone (Hard)</u>	<u>16</u>	<u>18</u>
<u>Sandstone</u>	<u>18</u>	<u>30</u>
<u>Yellow Clay</u>	<u>30</u>	<u>36</u>
<u>Sandstone</u>	<u>36</u>	<u>42</u>
<u>Red Clay</u>	<u>42</u>	<u>46</u>
<u>Limestone</u>	<u>46</u>	<u>54</u>
<u>Red Clay</u>	<u>54</u>	<u>68</u>
<u>Limestone</u>	<u>68</u>	<u>72</u>
<u>Vein @ 54'</u>		

SKETCH SHOWING LOCATION

Locate in reference to numbered
state highways, street intersections, county roads, etc.DRILLING FIRM Maana Drilling
ADDRESS Rt 3 Woodfield ODATE 8-10-76
SIGNED Rick Maana^oIf additional space is needed to complete well log, use next consecutive numbered form. p

107

ADDENDUM TO PART 2, ITEM C(1), THE OHIO VALLEY COAL COMPANY

APR-28-98 13:35 FROM:OVCC FRONT DESK

ID:6149269112

PAGE 5/10

WELL LOG AND DRILLING REPORT

ORIGINAL

NO CARBON PAPER
NECESSARY -
SELF-TRANSCRIBINGState of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Fountain Square
Columbus, Ohio 43224

504855

COUNTY DELMONT TOWNSHIP WASHINGTON SECTION OF TOWNSHIP _____
OWNER REX GORDARD ADDRESS RT 1 ALLEQUANTA, O.
LOCATION OF PROPERTY 1/4 mi off ST RT 145 on Twp Rd. 109

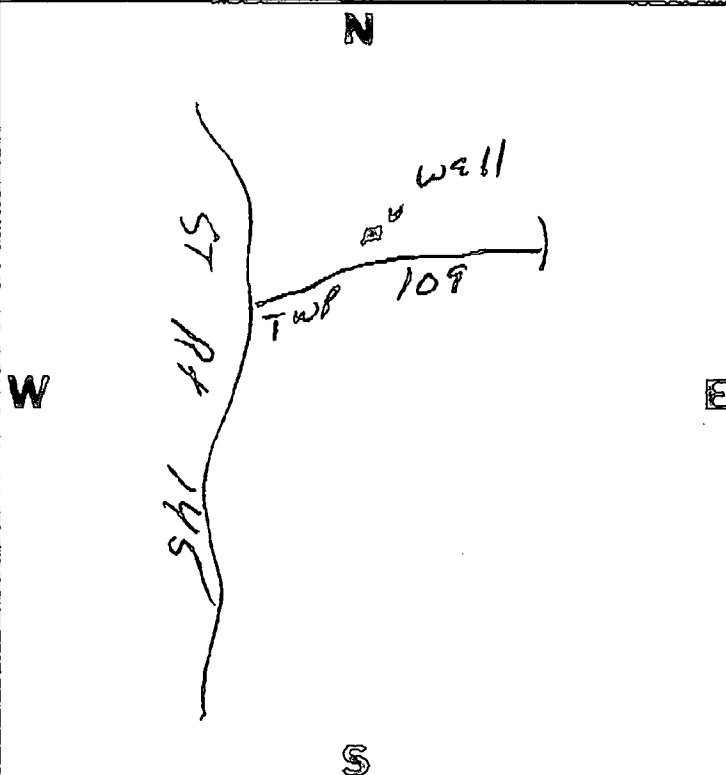
CONSTRUCTION DETAILS

Casing diameter _____ Length of casing NONE
Type of screen _____ Length of screen _____
Type of pump _____
Capacity of pump _____
Depth of pump setting _____
Date of completion _____BAILING OR PUMPING TEST
(specify one by circling)Test rate _____ gpm Duration of test _____ hrs
Drawdown NO WATER ft Date _____
Static level (depth to water) _____ ft
Quality (clear, cloudy, taste, odor) PLUGGED
Pump installed by _____

WELL LOG

Formations: sandstone, shale, limestone, gravel, clay	From	To
<u>Top</u>	<u>0 ft</u>	<u>2 ft</u>
<u>Lime Clay + Mud</u>	<u>2</u>	<u>18</u>
<u>Red Clay</u>	<u>18</u>	<u>25</u>
<u>Sandstone</u>	<u>25</u>	<u>30</u>
<u>Limestone</u>	<u>30</u>	<u>42</u>
<u>Red Clay</u>	<u>42</u>	<u>48</u>
<u>Limestone</u>	<u>48</u>	<u>54</u>
<u>Red Clay</u>	<u>54</u>	<u>68</u>
<u>Limestone</u>	<u>68</u>	<u>86</u>
<u>Limestone Clay</u>	<u>86</u>	<u>90</u>
<u>Limestone</u>	<u>90</u>	<u>102</u>
<u>Limestone Clay</u>	<u>102</u>	<u>107</u>
<u>Limestone</u>	<u>107</u>	<u>114</u>
<u>Gray Sandstone</u>	<u>114</u>	<u>130</u>
<u>No Water</u>		
<u>Plugged</u>		

SKETCH SHOWING LOCATION

Locate in reference to numbered
state highways, street intersections, county roads, etc.DRILLING FIRM Mason Drilling
ADDRESS St. 3 Woodfield ODATE 8-5-76
SIGNED Rich Mason

If additional space is needed to complete well log, use next consecutive numbered form.

TOVCC 13927

ADDENDUM TO PART 2, ITEM C(1), THE OHIO VALLEY COAL COMPANY

APR-28-88 13:35 FROM: OVCC FRONT DESK

ID: 6149269112

PAGE 8/10 ORIGINAL

WELL LOG AND DRILLING REPORT

PLEASE USE PENCIL
OR TYPEWRITER

DO NOT USE INK

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio 43212

No 356318

County Belmont Township Washington Section of Township 28
Owner Robert L. Soper Address Gladonia Ct.
Location of property 3/4 mile 148 above Gladonia

CONSTRUCTION DETAILS		BAILING OR PUMPING TEST	
Casing diameter <u>8"</u>	Length of casing <u>20</u>	Pumping Rate _____ G.P.M.	Duration of test _____ hrs.
Type of screen _____	Length of screen _____	Drawdown _____ ft.	Date _____
Type of pump _____		Static level-depth to water _____ ft.	
Capacity of pump _____		Quality (clear, cloudy, taste, odor) <u>Good</u>	
Depth of pump setting _____		<u>2-4 gal./min.</u>	
Date of completion <u>Sept 12/87</u>		Pump installed by _____	

WELL LOG*			SKETCH SHOWING LOCATION	
Formations Sandstone, shale, limestone, gravel and clay	From	To	Locate in reference to numbered State Highways, St. Intersections, County roads, etc.	
<u>Loam & Gravel</u>	<u>0 Feet</u>	<u>20 Ft.</u>	<u>N.</u>	
<u>Shale & Clay</u>	<u>20</u>	<u>34</u>		
<u>Water at 24 ft</u>				

Drilling Firm John J. Soper
Address Franklin Rd

Date Sept 12/87
Signed John J. Soper

*If additional space is needed to complete well log, use next consecutive numbered form.

TOVCC 13928

ADDENDUM TO PART 2, ITEM C(1), THE OHIO VALLEY COAL COMPANY

APR-28-88 13:38 FROM:OVCC FRONT DESK

ID:6149289112

PAGE 7/10
ORIGINAL

PLEASE USE PENCIL
OR TYPEWRITER
DO NOT USE INK

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio

No. 265757

County Belmont Township Spring Section of Township 33
Owner Russell Hobart Address Bealville Rd. 1967
Location of property 1400 W. 1st St. 1st of 1st

CONSTRUCTION DETAILS

Casing diameter 6 1/4 Length of casing 300
Type of screen Length of screen
Type of pump
Capacity of pump
Depth of pump setting
Date of completion

BAILING OR PUMPING TEST

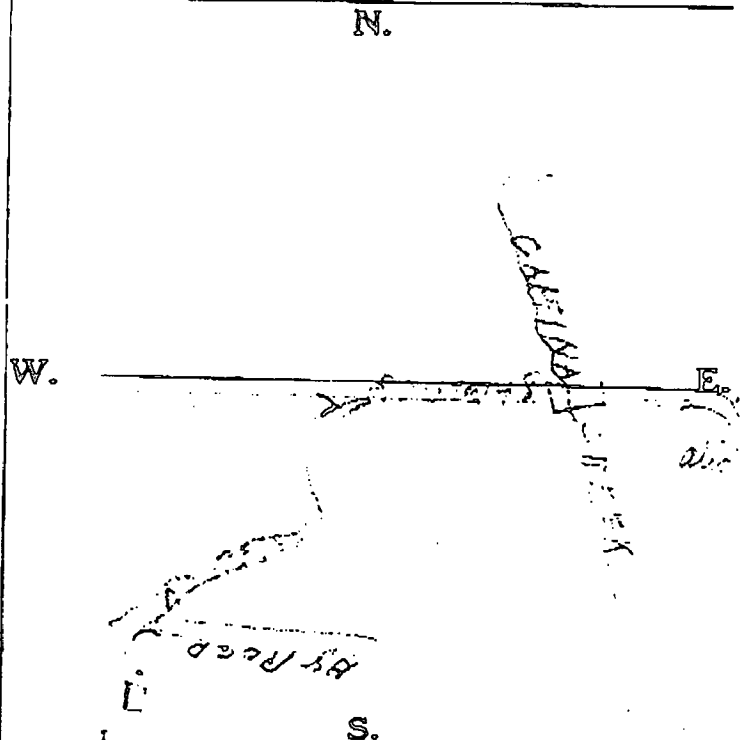
Pumping rate G.P.M. Duration of test hrs.
Drawdown ft. Date
Developed capacity 6 gal/min
Static level—depth to water ft.
Pump installed by

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
<u>Limestone</u>	<u>0 Feet</u>	<u>33 Ft.</u>
<u>Shale</u>	<u>33</u>	<u>70</u>
<u>Gravel</u>		
<u>Clay</u>		

SKETCH SHOWING LOCATION

Locate in reference to numbered
State Highways, St. Intersections, County roads, etc.



See reverse side for instructions

Drilling Firm Bealville Rd. 1967
Address 1400 W. 1st St. 1st of 1st

Date June 2/61
Signed Bealville Rd. 1967

150-145 (21)

TOVCC 13929

APR-28-98 13:38 FROM:OVCC FRONT DESK

ID: 6149289112

PAGE 8/10
ORIGINALPLEASE USE PENCIL
OR TYPEWRITER.
DO NOT USE INK.State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio

No. 272557

County Belmont Township Washington Section of Township 1
 Owner R. H. Kirby Address Bealsville P.O. 1
 Location of property 1/4 Sec 16 on 145 of 145 B. & O. Railroad Line

CONSTRUCTION DETAILS

Casing diameter 6" Length of casing 29
 Type of screen Length of screen
 Type of pump
 Capacity of pump
 Depth of pump setting
 Date of completion May 6/92

BAILING OR PUMPING TEST

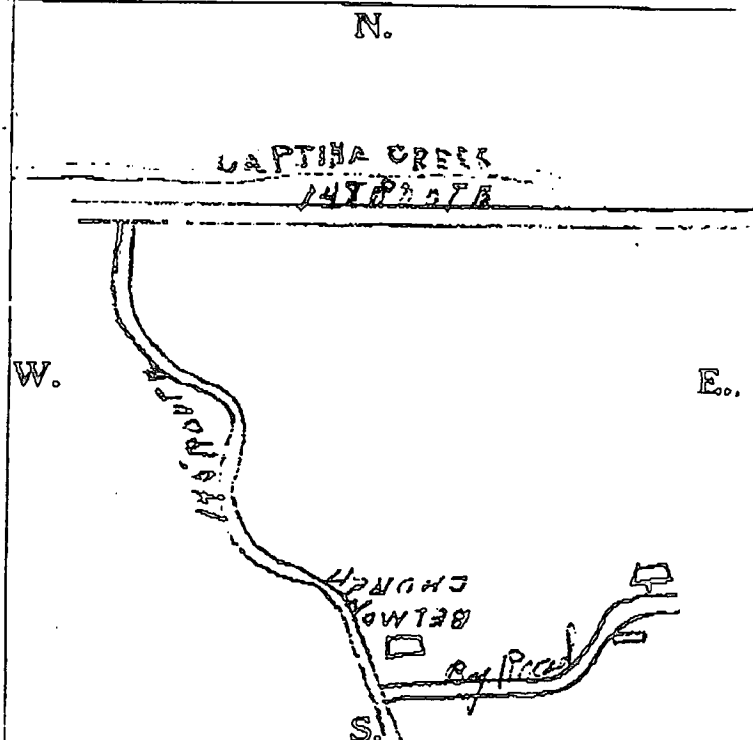
Pumping rate G.P.M. Duration of test hrs.
 Drawdown ft. Date
 Developed capacity 3 gal
 Static level—depth to water ft.
 Pump installed by

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
<u>Lima shale</u>	<u>0 Feet</u>	<u>25 Ft</u>
<u>Shale & clay</u>	<u>25</u>	<u>60</u>
<u>Clay & sand</u>	<u>60</u>	<u>115</u>

SKETCH SHOWING LOCATION

Locate in reference to numbered
State Highways, St. Intersections, County roads, etc.



See reverse side for instructions

Drilling Firm Chas. H. Lums
 Address 1000 W. 1st St.

Date May 6/92
 Signe Chas. H. Lums

TR 104

APR-28-98 13:37 FROM:OVCC FRONT DESK

ID: 6149289112

PAGE 9/10
ORIGINALPLEASE USE PENCIL
OR TYPEWRITER
DO NOT USE INK.State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio

No. 272568

County Belmont Township Washington Section of Township 31
Owner Earl L. Lively Address Albion, Ohio
Location of property 9 1/2 S. of Albion 145 ROUTE

CONSTRUCTION DETAILS

Casing diameter 10 Length of casing 28
Type of screen _____ Length of screen _____
Type of pump jet
Capacity of pump 1
Depth of pump setting _____
Date of completion Mar 25/63

BAILING OR PUMPING TEST

Pumping rate _____ G.P.M. Duration of test _____ hrs.
Drawdown _____ ft. Date _____
Developed capacity 5 gal/min
Static level—depth to water _____ ft.
Pump installed by Earl L. Lively

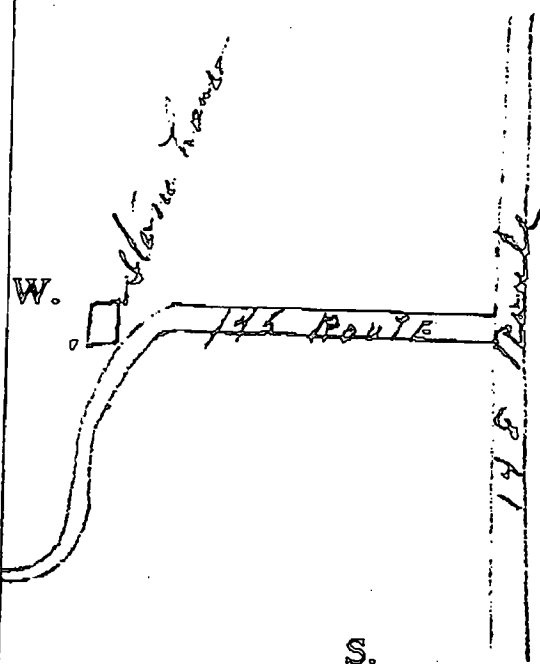
WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
<u>Gravel & Sand</u>	0 Feet	<u>28</u> Ft.
<u>Shale</u>	<u>28</u>	<u>31</u>
<u>Gravel Shale</u>	<u>31</u>	<u>90</u>
<u>Gravel</u>	<u>90</u>	<u>100</u>

SKETCH SHOWING LOCATION

Locate in reference to numbered
State Highways, St. Intersections, County roads, etc.

N.



S.

See reverse side for instructions

Drilling Firm Earl L. Lively
Address Albion, OhioDate Mar 25/63
Signed Earl L. Lively

SR 145

APR-28-98 13:37 FROM: OVCC FRONT DESK

ID: 6149289112

PAGE 10/10
ORIGINAL

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1500 Dublin Road
Columbus, Ohio

No. 179416

County Belmont Township Washington Section of Township 32
Owner Ray Brooks Address Alledonia Ohio
Location of property 2 1/2 Miles South Alledonia

CONSTRUCTION DETAILS

Casing diameter 7" Length of casing 16
Type of screen _____ Length of screen _____
Type of pump _____
Capacity of pump _____
Depth of pump setting 7
Date of completion Jan 56

BAILING OR PUMPING TEST

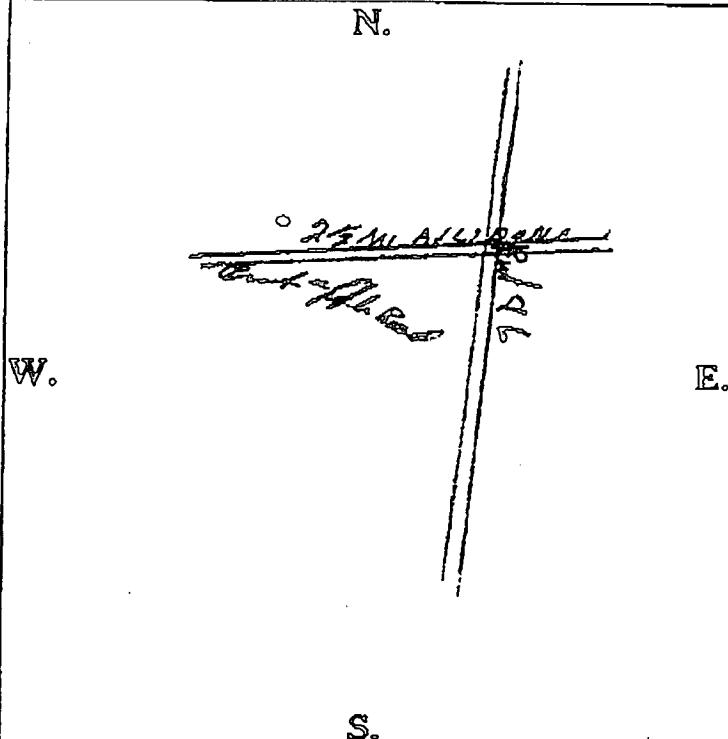
Pumping rate _____ G.P.M. Duration of test _____ hrs.
Drawdown _____ ft. Date _____
Developed capacity 1 1/2 PR
Static level—depth to water _____ ft.
Pump installed by _____

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
<u>Born</u>	0 Feet	16 Ft.
<u>Stone</u>	16	24
<u>Clay</u>	24	34
<u>Limestone</u>	34	52
<u>Clay</u>	52	65
<u>Limestone</u>	65	75
<u>Clay</u>	75	80

SKETCH SHOWING LOCATION

Locate in reference to numbered
State Highways, St. Intersections, County roads, etc.



See reverse side for instructions

Drilling Firm Edwards & Sons
Address Locust Hill 12/50

Date 1956
Signed Edwards & Sons

i TR 103

ADDENDUM TO ATTACHMENT 14B
THE OHIO VALLEY COAL COMPANY

Please note that Zones A & B do not occur within the limits of the coal refuse disposal area, and neither zone was encountered during the drilling of the GMW-98 monitoring well series, therefore, these zones are not shown on Plate 6, "Piezometric Surface Map".

Cross sections A-A' and B-B' intersect at the location of monitoring wells 98-3S and 98-3D. Section A-A', dated January, 1998 depicts stratigraphy relative to the depths of wells 98-1 and 98-3. The stratigraphy shown below well 3 is approximate. Section B-B', dated April, 1998, depicts stratigraphy based on wells 98-2, 98-3, and 98-4. Wells 2 and 4 provide lithologic descriptions 240 feet below well 3.

The position of the coal beds is referenced to the USGS Professional Paper 380: Geology and Coal Resources of Belmont County, Ohio Henry L. Berryhill, 1963. Locally, in the Powhatan No. 6 Mine, the Pittsburgh No. 8 coalbed occurs at an approximate elevation of 715 feet, mean sea level. Coalbeds are found in the proposed refuse area at intervals of 270 and 309 feet above the Pittsburgh no. 8 coalbed. These correlate best with the Waynesburg No. 11, at an elevation of 985 feet+/-, and the Waynesburg "A", at an elevation of 1024 feet+/-.

Cross Sections A-A' and B-B' show the stratigraphy and relative positions of groundwater found during Phase 1 of the Hydrogeologic Investigation. Section A-A' shows groundwater levels for monitoring wells 1 and 3, from east to west through the western tributary of Perkins Run. Section B-B' shows wells 3, 2, and 4, from northwest to southeast, along the southern ridge of the western tributary into Perkins Run. Well 3 is common to both sections.

Stratigraphy for each well is taken from the driller's logs found in Appendix 2 of the Hydrogeologic Report. Descriptions are based on the return cuttings from air-rotary drilling. Wells at each location were drilled to 50 and 100 foot depths, from varying surface elevations along the ridgetops (wells 1, 2, and 3) to the valley floor of Perkins Run (well 4). Total stratigraphic interval is over 460 feet.

Information from the wells was combined to construct both cross-sections. The Waynesburg "A" coalbed was encountered only in well 2, at an approximate elevation of 1030 feet. Since this unit is expected to occur throughout the study area, it was projected onto both cross-sections A-A' and B-B', at the same elevation.

Sections A-A' and B-B' are computer drawn at slightly different scales. They do not match at well 3, nor were they intended to match. Both sections show stratigraphy and groundwater levels relative to monitor wells 1, 2, 3, and 4.

The groundwater elevation in monitor well 98-4S, Zone G, is considered to be the first continuous aquifer underlying the facility. This was agreed upon at a meeting with O.E.P.A. in Logan, on July 14, 1999.

ADDENDUM TO ATTACHMENT 14B, continued;

Monitor well 98-4S was drilled 50 feet deep to investigate the shallow groundwater regime. Ground water levels here have varied from 880.95 feet in December, 1998, to 870.14 feet in December, 1999.

Stratigraphy and fracture systems control the groundwater level here.

The screened interval elevation for well 98-4S is 841 to 853 feet. This interval and its overlying stratigraphy is composed of shale and limestone to an elevation of 881 feet. Outcrop observations here indicate this stratigraphic interval is jointed and therefore is expected to be permeable. Geologic joints, used herein, are defined as naturally occurring fractures systems that have no appreciable displacement. A clay layer (aquitard) caps the 881 foot elevation. The 881 foot level, and somewhat lower elevations outcrop in Perkins Run, as shown in Section B-B'.

Monitor well 98-4D was drilled approximately 50 feet deep to investigate the possible occurrence of deeper groundwater at location 4. The screened interval elevation is 791.56 to 803.56 feet. Over the past year, groundwater levels have varied from 828 feet in December, 1998, to 816 feet in December, 1999. This is designated as Zone H, the lowest aquifer identified in the study.

Factors controlling the groundwater level in well 98-4D are stratigraphy, fracture systems and the regional dip of strata.

Limestone, shale, and coal (Sewickley #9) overlie the screened interval by at least 70 feet. These units are expected to be permeable due to geologic joints. Permeability here will decrease with depth, particularly below 50 feet from the surface, as the joints become more closely spaced. Coal, on the other hand will continue to be highly permeable, even at depth, because of the dense spacing of face and butt cleats (systematic fractures in coal). Rock joints at the screened level are expected to extend upward to elevations of 828 or higher.

The regional dip of the strata is another consideration. Strata in Belmont County dips approximately 18 feet per mile to the southeast. There could be hydraulic head, especially in the very permeable No. 9 coalbed.

Given this geologic setting, there is nothing unusual about having groundwater levels 13 to 25 feet above the screened section of well 98-4D.

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 14C
(WELL/SPRING INVENTORY)

Applicant's Name THE OHIO VALLEY COAL COMPANY (D-0360-8)

Well/Spring Identification Number	Name of Owner of Well/Spring	Surface Elevation of Well/Spring	Depth of Well in Feet Below Land Surface	Static Water Level of Well in Feet Below Land Surface	Lithology of Supplying Aquifer/ Waterbearing Zone	Known Uses of Well/Spring (if spring give * discharge rate)
S6-5	T.O.V.C.C.	1190	N/A	N/A	B	NOT IN USE, <1 GPM
S6-10	THE OHIO VALLEY COAL COMPANY	1170	N/A	N/A	B	NOT IN USE 16.0 GPM
S6-11	THE OHIO VALLEY COAL COMPANY	1124	N/A	N/A	C	NOT IN USE 15.0 GPM
S6-13	THE OHIO VALLEY COAL COMPANY	1028	N/A	N/A	E	NOT IN USE 5.0 GPM
S6-14	THE OHIO VALLEY COAL COMPANY	1092	N/A	N/A	D	NOT IN USE 7.0 GPM
S6-15	R & F COAL COMPANY	1170	N/A	N/A	B	NOT IN USE 20.3 GPM
S6-16	THE OHIO VALLEY COAL COMPANY	1180	N/A	N/A	B	NOT IN USE 8.0 GPM
S6-17	THE OHIO VALLEY COAL COMPANY	1180	N/A	N/A	B	NOT IN USE 4.0 GPM
S6-18	THE OHIO VALLEY COAL COMPANY	1175	N/A	N/A	B	NOT IN USE 7.0 GPM
S6-19	R & F COAL COMPANY	970	N/A	N/A	F	NOT IN USE 3 GPM

* INDICATES HIGHEST FLOW DURING CONSECUTIVE 6 MONTH MEASUREMENT PERIOD.

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 14C
(WELL/SPRING INVENTORY)

Applicant's Name THE OHIO VALLEY COAL COMPANY (D-0360-8)

Well/Spring Identification Number	Name of Owner of Well/Spring	Surface Elevation of Well/Spring	Depth of Well in Feet Below Land Surface	Static Water Level of Well in Feet Below Land Surface	Lithology of Supplying Aquifer/ Waterbearing Zone	Known Uses of Well/Spring (if spring give **discharge rate)
S6-20	R & F COAL COMPANY	980	N/A	N/A	F	NOT IN USE <1.0 GPM
S6-21	R & F COAL COMPANY	980	N/A	N/A	F	NOT IN USE <1.0 GPM
S6-22	R & F COAL COMPANY	985	N/A	N/A	F	NOT IN USE 8.2 GPM
W6-5	WM. E. AND G.V. WHARTON	1260	* INACCESSIBLE	46.0	A	DOMESTIC
W6-6	WM. E. AND G.V. WHARTON	1265	* INACCESSIBLE	21.0	A	DOMESTIC
DS6-7	R & K SKAGGS	1120	N/A	N/A	C	DOMESTIC 5.9 GPM
DS6-12	THE OHIO VALLEY COAL COMPANY	970	N/A	N/A	F	NOT IN USE 1.1 GPM
DS6-6	THE OHIO VALLEY COAL COMPANY	1028	N/A	N/A	E	NOT IN USE 4.0 GPM
DW6-4	WM. E. AND G.V. WHARTON	1280	WELL	SEALED	A	NOT IN USE

* DUE TO OBSTRUCTIONS WITHIN THE CASING, WELL DEPTH COULD NOT BE ESTABLISHED, NO LOGS WERE AVAILABLE FOR THESE WELLS, AND THE RESIDENT DID NOT KNOW THE DEPTHS.

** INDICATES HIGHEST FLOW DURING CONSECUTIVE 6 MONTH MEASUREMENT PERIOD.

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	S6-5	S6-5	S6-5	S6-5	S6-5	
2.	Lab Identification Number 98-	03-129	04-143	05-228	06-244	07-213	
3.	High (H) / Low (L) Designation (if applicable)			SUPPLEMENTAL			
4.	Surface Elevation for Sampling Station (msl)	1190	1190	1190	1190	1190	
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	
7.	Flow for Spring and Stream (gpm or cfs)	<1 GPM	<1 GPM	<1 GPM	<1 GPM	.70 GPM	
8.	Date Above Measurements Made	3-10-98	4-14-98	5-22-98	6-23-98	7-17-98	
9.	Aquifer/Zone Identification for Well/Spring	B	B	B	B	B	
10.	pH (Standard Units)	6.90	7.60	7.50	7.50	7.70	
11.	Total Acidity (mg/l CaCO ₃)	6.40	10.0	7.70	10.0	13.0	
12.	Total Alkalinity (mg/l CaCO ₃)	70.0	160.0	180.0	170.0	200.0	
13.	Specific Conductivity (umhos/cm at 25 C)	220	320	310	380	400	
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	0.07	0.06	0.06	0.11	0.16	
16.	Total Sulfates (mg/l)	34.0	28.0	22.0	31.0	26.0	
17.	Total Iron (mg/l)	2.40	0.29	0.17	0.18	0.58	
18.	Total Suspended Solids (mg/l)	49.0	5.30	4.7	1.3	12.0	
19.	Total Hardness (mg/l as CaCO ₃)	110.0	190.0	190.0	180.0	210.0	
20.	Date Sampled for Analysis	3-10-98	4-14-98	5-22-98	6-23-98	7-17-98	
21.	Date Last Precipitation Event Occurred	3-9-98	4-14-98	5-19-98	6-18-98	7-15-98	

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	S6-10	S6-10	S6-10	S6-10	S6-10	S6-10
2.	Lab Identification Number 98-	02-133	03-080	04-161	05-222	06-255	07-221
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1170	1170	1170	1170	1170	1170
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	16.0 GPM	9.7 GPM	6.4 GPM	2.9 GPM	.25 GPM	.13 GPM
8.	Date Above Measurements Made	2-23-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	B	B	B	B	B	B
10.	pH (Standard Units)	8.20	8.30	8.20	7.90	8.10	8.30
11.	Total Acidity (mg/l CaCO ₃)	7.70	8.40	4.00	20.0	7.40	4.60
12.	Total Alkalinity (mg/l CaCO ₃)	200.00	200.00	240.0	240.0	240.0	250.0
13.	Specific Conductivity (umhos/cm at 25 C)	300	300	440	420	450	500
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	0.02	<0.02	0.02	0.03	0.03	0.02
16.	Total Sulfates (mg/l)	52.0	43.0	42.0	40.0	40.0	45.0
17.	Total Iron (mg/l)	0.08	0.14	0.05	0.30	0.41	0.63
18.	Total Suspended Solids (mg/l)	<1.0	3.3	<1.0	5.3	16.0	<1.0
19.	Total Hardness (mg/l as CaCO ₃)	190.0	210.00	250.0	260.0	250.0	240.0
20.	Date Sampled for Analysis	2-23-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-23-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	S6-11	S6-11	S6-11	S6-11	S6-11	S6-11
2.	Lab Identification Number 98-	02-137	03-091	04-155	05-220	06-256	07-222
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1124	1124	1124	1124	1124	1124
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	5.0 GPM	1.8 GPM	.92 GPM	1.2 GPM	15 GPM	.72 GPM
8.	Date Above Measurements Made	2-23-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	C	C	C	C	C	C
10.	pH (Standard Units)	7.80	7.80	7.90	7.60	7.70	8.00
11.	Total Acidity (mg/l CaCO ₃)	9.30	6.30	4.40	9.10	4.50	4.40
12.	Total Alkalinity (mg/l CaCO ₃)	220.00	220.00	220.0	240.0	190.0	190.0
13.	Specific Conductivity (umhos/cm at 25 C)	270	400	480	440	400	450
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	0.21	0.05	0.05	0.20	0.20	0.02
16.	Total Sulfates (mg/l)	71.0	42.0	39.0	44.0	39.0	49.0
17.	Total Iron (mg/l)	7.0	0.90	14.0	1.10	0.16	0.30
18.	Total Suspended Solids (mg/l)	340.0	25.0	39.0	56.0	6.7	<1.0
19.	Total Hardness (mg/l as CaCO ₃)	260.0	250.00	230.0	270.0	200.0	200.0
20.	Date Sampled for Analysis	2-23-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-23-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	S6-13	S6-13	S6-13	S6-13	S6-13	S6-13
2.	Lab Identification Number 98-	02-158	03-084	04-162	05-221	06-283	07-231
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1028	1028	1028	1028	1028	1028
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	5.0 GPM	1.3 GPM	.27 GPM	.9 GPM	1.25 GPM	.30 GPM
8.	Date Above Measurements Made	2-23-98	3-6-98	4-14-98	5-22-98	6-24-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	E	E	E	E	E	E
10.	pH (Standard Units)	7.70	8.20	8.20	7.80	7.60	7.70
11.	Total Acidity (mg/l CaCO ₃)	4.70	3.20	3.70	3.20	3.50	28.0
12.	Total Alkalinity (mg/l CaCO ₃)	95.00	100.00	130.0	140.0	140.0	42.0
13.	Specific Conductivity (umhos/cm at 25 C)	220	240	280	250	340	240
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	<0.02	<0.02	0.02	0.08	0.03	2.10
16.	Total Sulfates (mg/l)	36.0	32.0	31.0	42.0	27.0	23.0
17.	Total Iron (mg/l)	0.08	0.06	<0.05	2.00	0.52	7.40
18.	Total Suspended Solids (mg/l)	<1.0	2.0	6.7	88.0	21.0	42.0
19.	Total Hardness (mg/l as CaCO ₃)	130.0	120.00	140.0	160.0	140.0	80.0
20.	Date Sampled for Analysis	2-23-98	3-6-98	4-14-98	5-22-98	6-24-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-23-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14.

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	S6-14	S6-14	S6-14	S6-14	S6-14	S6-14
2.	Lab Identification Number 98-	02-159	03-087	04-156	05-226	06-259	07-228
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1092	1092	1092	1092	1092	1092
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	7.0 GPM	2.3 GPM	.52 GPM	1.25 GPM	1.22 GPM	.66 GPM
8.	Date Above Measurements Made	2-24-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	D	D	D	D	D	D
10.	pH (Standard Units)	7.50	8.70	7.90	7.80	7.60	8.10
11.	Total Acidity (mg/l CaCO ₃)	4.00	4.60	6.60	6.50	4.90	9.80
12.	Total Alkalinity (mg/l CaCO ₃)	88.00	100.00	260.0	180.0	170.0	280.0
13.	Specific Conductivity (umhos/cm at 25 C)	220	270	700	420	420	840
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	<0.02	<0.02	<0.02	0.03	0.05	0.04
16.	Total Sulfates (mg/l)	51.0	56.0	230.0	79.0	74.0	270.0
17.	Total Iron (mg/l)	0.12	0.08	<0.05	0.42	1.40	0.72
18.	Total Suspended Solids (mg/l)	<1.0	<1.0	<1.0	33.0	40.0	60.0
19.	Total Hardness (mg/l as CaCO ₃)	120.0	150.00	350.0	250.0	250.0	480.0
20.	Date Sampled for Analysis	2-24-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-24-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	S6-15	S6-15	S6-15	S6-15	S6-15	S6-15
2.	Lab Identification Number 98-	02-160	03-088	04-154	05-211	06-258	07-229
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1170	1170	1170	1170	1170	1170
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	8.0 GPM	10.8 GPM	10 GPM	13.8 GPM	20.3 GPM	3.45 GPM
8.	Date Above Measurements Made	2-24-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	B	B	B	B	B	B
10.	pH (Standard Units)	8.10	8.00	8.00	7.80	7.80	8.00
11.	Total Acidity (mg/l CaCO ₃)	6.00	3.80	3.70	8.10	4.70	7.20
12.	Total Alkalinity (mg/l CaCO ₃)	140.00	160.00	200.0	220.0	220.0	220.0
13.	Specific Conductivity (umhos/cm at 25 C)	280	340	470	420	410	560
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	0.09	<0.02	0.04	0.11	0.04	0.02
16.	Total Sulfates (mg/l)	57.0	54.0	56.0	60.0	51.0	72.0
17.	Total Iron (mg/l)	1.20	0.08	0.27	0.79	0.39	0.33
18.	Total Suspended Solids (mg/l)	65.0	<1.0	6.7	15.0	9.0	7.30
19.	Total Hardness (mg/l as CaCO ₃)	170.0	220.00	230.0	240.0	270.0	240.0
20.	Date Sampled for Analysis	2-24-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-24-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	S6-16	S6-16	S6-16	S6-16	S6-16	S6-16
2.	Lab Identification Number 98-	02-168	03-093	04-151	05-224	06-253	07-224
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1180	1180	1180	1180	1180	1180
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	8.0 GPM	1.9 GPM	.75 GPM	.25 GPM	1 GPM	.14 GPM
8.	Date Above Measurements Made	2-25-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	B	B	B	B	B	B
10.	pH (Standard Units)	7.50	7.60	7.80	7.70	7.60	7.60
11.	Total Acidity (mg/l CaCO ₃)	42.0	3.20	4.20	3.50	5.90	10.0
12.	Total Alkalinity (mg/l CaCO ₃)	94.00	98.00	140.0	150.0	150.0	180.0
13.	Specific Conductivity (umhos/cm at 25 C)	210	200	260	250	310	440
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	0.02	<0.02	0.05	0.03	0.10	0.14
16.	Total Sulfates (mg/l)	33.0	30.0	28.0	28.0	27.0	20.0
17.	Total Iron (mg/l)	0.08	0.08	0.12	0.13	0.38	0.24
18.	Total Suspended Solids (mg/l)	<1.0	<1.0	4.0	2.0	<1.0	<1.0
19.	Total Hardness (mg/l as CaCO ₃)	110.0	110.00	160.0	150.0	170.0	210.0
20.	Date Sampled for Analysis	2-25-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-24-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	S6-17	S6-17	S6-17	S6-17	S6-17	S6-17
2.	Lab Identification Number 98-	02-169	03-094	04-152	05-225	06-252	07-223
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1180	1180	1180	1180	1180	1180
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	4.0 GPM	2.8 GPM	.83 GPM	.32 GPM	2.2 GPM	1.49 GPM
8.	Date Above Measurements Made	2-25-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	B	B	B	B	B	B
10.	pH (Standard Units)	7.70	7.90	7.90	7.90	7.90	8.40
11.	Total Acidity (mg/l CaCO ₃)	17.0	5.70	6.70	5.90	5.10	5.40
12.	Total Alkalinity (mg/l CaCO ₃)	180.00	180.00	220.0	230.0	230.0	240.0
13.	Specific Conductivity (umhos/cm at 25 C)	330	330	350	380	410	370
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	<0.02	<0.02	0.06	0.05	0.04	0.02
16.	Total Sulfates (mg/l)	44.0	42.0	36.0	53.0	36.0	35.0
17.	Total Iron (mg/l)	<0.05	0.06	0.52	0.23	0.54	0.25
18.	Total Suspended Solids (mg/l)	<1.0	<1.0	36.0	7.3	22.0	<1.0
19.	Total Hardness (mg/l as CaCO ₃)	200.0	190.00	220.0	250.0	250.0	250.0
20.	Date Sampled for Analysis	2-25-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-24-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

\ 9/88

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

ATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)

APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	S6-18	S6-18	S6-18	S6-18	S6-18	S6-18
2.	Lab Identification Number 98-	02-175	03-073	04-145	05-214	06-234	07-215
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1175	1175	1175	1175	1175	1175
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	7.0 GPM	3.2 GPM	3.3 GPM	3.6 GPM	2.7 GPM	1.67 GPM
8.	Date Above Measurements Made	2-25-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	B	B	B	B	B	B
10.	pH (Standard Units)	7.70	8.20	8.20	7.80	7.90	8.20
11.	Total Acidity (mg/l CaCO ₃)	7.40	40.0	<1.0	4.30	5.20	6.00
12.	Total Alkalinity (mg/l CaCO ₃)	140.00	160.00	180.0	200.0	220.0	180.0
13.	Specific Conductivity (umhos/cm at 25 C)	260	300	380	320	350	380
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	<0.02	<0.02	0.03	0.03	0.02	0.02
16.	Total Sulfates (mg/l)	36.0	30.0	33.0	53.0	44.0	40.0
17.	Total Iron (mg/l)	0.12	0.15	0.20	0.10	0.22	0.42
18.	Total Suspended Solids (mg/l)	<1.0	2.0	4.0	<1.0	15.0	2.0
19.	Total Hardness (mg/l as CaCO ₃)	160.0	190.00	180.0	210.0	200.0	180.0
20.	Date Sampled for Analysis	2-25-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-24-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.

Address Battle Run Road, RD. #2, Box 227A

State West Virginia

City Triadelphia

Zip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

TOVCC 13945

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	S6-19	S6-19	S6-19	S6-19	S6-19	S6-19
2.	Lab Identification Number 98-	02-176	03-032	04-137	05-233	06-239	07-211
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	970	970	970	970	970	970
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	1.6 GPM	3.0 GPM	.96 GPM	<1 GPM	.75 GPM	.78 GPM
8.	Date Above Measurements Made	2-25-98	3-6-98	4-14-98	5-23-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	F	F	F	F	F	F
10.	pH (Standard Units)	8.10	8.10	8.00	8.10	7.90	8.00
11.	Total Acidity (mg/l CaCO ₃)	9.50	4.80	3.70	1.60	24.00	5.60
12.	Total Alkalinity (mg/l CaCO ₃)	210.00	190.00	240.0	240.0	260.0	260.0
13.	Specific Conductivity (umhos/cm at 25 C)	420	400	420	460	540	520
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	<0.02	0.14	0.07	0.09	0.10	0.25
16.	Total Sulfates (mg/l)	69.0	51.0	53.0	79.0	50.0	61.0
17.	Total Iron (mg/l)	0.76	2.80	3.20	4.50	3.70	11.0
18.	Total Suspended Solids (mg/l)	16.0	2.70	91.0	120.0	180.0	530.0
19.	Total Hardness (mg/l as CaCO ₃)	240.0	230.00	280.0	310.0	290.0	350.0
20.	Date Sampled for Analysis	2-25-98	3-6-98	4-14-98	5-23-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-24-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14.

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	S6-20	S6-20	S6-20	S6-20	S6-20	S6-20
2.	Lab Identification Number 98-	02-177	03-133	04-138	05-232	06-240	07-210
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	980	980	980	980	980	980
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	<1.0 GPM	<1.0 GPM	<1.0 GPM	<1.0 GPM	<1.0 GPM	0.43 GPM
8.	Date Above Measurements Made	2-25-98	3-10-98	4-14-98	5-23-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	F	F	F	F	F	F
10.	pH (Standard Units)	7.20	8.30	7.90	7.90	7.20	7.50
11.	Total Acidity (mg/l CaCO ₃)	15.0	4.60	4.80	7.10	23.0	16.0
12.	Total Alkalinity (mg/l CaCO ₃)	240.00	230.00	250.0	260.0	270.0	280.0
13.	Specific Conductivity (umhos/cm at 25 C)	430	440	470	480	540	600
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	<0.02	<0.02	0.02	0.03	0.22	0.03
16.	Total Sulfates (mg/l)	48.0	61.0	55.0	56.0	66.0	65.0
17.	Total Iron (mg/l)	<0.05	0.25	0.05	0.04	3.8	0.88
18.	Total Suspended Solids (mg/l)	<1.0	<1.0	<1.0	54.0	69.0	21.0
19.	Total Hardness (mg/l as CaCO ₃)	280.0	360.00	290.0	310.0	320.0	300.0
20.	Date Sampled for Analysis	2-25-98	3-10-98	4-14-98	5-23-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-24-98	3-9-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	S6-21	S6-21	S6-21	S6-21	S6-21	S6-21
2.	Lab Identification Number 98-	02-178	03-134	04-139	05-231	06-241	07-209
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	980	980	980	980	980	980
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	<1.0 GPM	<1.0 GPM	<1.0 GPM	<1.0 GPM	<1.0 GPM	0.3 GPM
8.	Date Above Measurements Made	2-25-98	3-10-98	4-14-98	5-23-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	F	F	F	F	F	F
10.	pH (Standard Units)	8.10	8.20	8.30	7.70	7.90	7.20
11.	Total Acidity (mg/l CaCO ₃)	8.20	4.00	1.40	9.40	35.0	7.20
12.	Total Alkalinity (mg/l CaCO ₃)	240.00	230.00	260.0	280.0	280.0	270.0
13.	Specific Conductivity (umhos/cm at 25 C)	470	480	480	530	560	600
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	0.03	0.02	0.05	0.11	0.60	0.12
16.	Total Sulfates (mg/l)	80.0	60.0	65.0	66.0	68.0	77.0
17.	Total Iron (mg/l)	0.50	0.68	1.50	5.80	19.0	4.50
18.	Total Suspended Solids (mg/l)	15.0	25.0	45.0	120.0	110.0	170.0
19.	Total Hardness (mg/l as CaCO ₃)	290.0	240.00	290.0	340.0	400.0	350.0
20.	Date Sampled for Analysis	2-25-98	3-10-98	4-14-98	5-23-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-24-98	3-9-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	S6-22	S6-22	S6-22	S6-22	S6-22	S6-22
2.	Lab Identification Number 98-	02-179	03-135	04-140	05-230	06-242	07-205
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	985	985	985	985	985	985
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	4.5 GPM	8.2 GPM	2.0 GPM	1.2 GPM	1.25 GPM	1.50 GPM
8.	Date Above Measurements Made	2-25-98	3-10-98	4-14-98	5-23-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	F	F	F	F	F	F
10.	pH (Standard Units)	8.20	8.20	8.30	8.10	8.00	8.10
11.	Total Acidity (mg/l CaCO ₃)	10.0	3.00	2.50	6.30	9.4	6.60
12.	Total Alkalinity (mg/l CaCO ₃)	240.00	240.00	240.0	230.0	250.0	240.0
13.	Specific Conductivity (umhos/cm at 25 C)	470	510	480	440	520	560
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	<0.02	0.02	0.25	0.06	0.06	0.05
16.	Total Sulfates (mg/l)	86.0	66.0	74.0	64.0	66.0	70.0
17.	Total Iron (mg/l)	0.40	0.33	4.30	3.20	1.80	2.0
18.	Total Suspended Solids (mg/l)	17.0	<1.0	48.0	110.0	75.0	120.0
19.	Total Hardness (mg/l as CaCO ₃)	290.0	280.00	340.0	280.0	290.0	290.0
20.	Date Sampled for Analysis	2-25-98	3-10-98	4-14-98	5-23-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-24-98	3-9-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)Applicant's Name THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	W6-5	W6-5	W6-6	W6-6	W6-5	W6-6
2.	Lab Identification Number 98-	02-120		02-121			
3.	High (H) / Low (L) Designation (if applicable)	H	RESIDENT REFUSED	H	RESIDENT REFUSED	RESIDENT REFUSED	RESIDENT REFUSED
4.	Surface Elevation for Sampling Station (msl)	1260	1260	1265	1265	1260	1265
5.	Depth of Well Below Land Surface (feet)	UNOB-TAINABLE	--	UNOB-TAINABLE	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	46.0	RESIDENT REFUSED	21.0	RESIDENT REFUSED	RESIDENT REFUSED	RESIDENT REFUSED
7.	Flow for Spring and Stream (gpm or cfs)	--	--	--	--	--	--
8.	Date Above Measurements Made	2/20/98	3/10/98	2/20/98	3/10/98	4-14-98	4-14-98
9.	Aquifer/Zone Identification for Well/Spring	A	A	A	A	A	A
10.	pH (Standard Units)	7.30	REFUSED	7.30	REFUSED	REFUSED	REFUSED
11.	Total Acidity (mg/l CaCO ₃)	34.0	--	36.0	--	--	--
12.	Total Alkalinity (mg/l CaCO ₃)	290.0	--	290.0	--	--	--
13.	Specific Conductivity (umhos/cm at 25 C)	720	--	520	--	--	--
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	<0.02	--	<0.02	--	--	--
16.	Total Sulfates (mg/l)	180.0	--	40.0	--	--	--
17.	Total Iron (mg/l)	0.08	--	0.05	--	--	--
18.	Total Suspended Solids (mg/l)	<1.0	--	<1.0	--	--	--
19.	Total Hardness (mg/l as CaCO ₃)	420.0	--	310.0	--	--	--
20.	Date Sampled for Analysis	2/20/98	3/10/98	2/20/98	3/10/98	4-14-98	4-14-98
21.	Date Last Precipitation Event Occurred	2/20/98	3/9/98	2/20/98	3/9/98	4-14-98	4-14-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD#2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	DS6-6	DS6-6	DS6-6	DS6-6	DS6-6	DS6-6
2.	Lab Identification Number 98-	02-138	03-081	04-160	--	--	--
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1028	1028	1028	1028	1028	1028
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	4.0 GPM	1.4 GPM	.26 GPM	DRY	DRY	DRY
8.	Date Above Measurements Made	2-23-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	E	E	E	E	E	E
10.	pH (Standard Units)	8.20	8.30	8.10			
11.	Total Acidity (mg/l CaCO ₃)	4.00	4.90	3.70			
12.	Total Alkalinity (mg/l CaCO ₃)	160.00	160.00	210.0			
13.	Specific Conductivity (umhos/cm at 25 C)	340	360	440			
14.	Total Dissolved Solids (mg/l)	--	--	--			
15.	Total Manganese (mg/l)	0.21	0.11	0.10			
16.	Total Sulfates (mg/l)	66.0	47.0	55.0			
17.	Total Iron (mg/l)	2.70	1.70	0.86			
18.	Total Suspended Solids (mg/l)	120.0	130.0	35.0			
19.	Total Hardness (mg/l as CaCO ₃)	180.0	180.00	220.0			
20.	Date Sampled for Analysis	2-23-98	3-6-98	4-14-98	N/A	N/A	N/A
21.	Date Last Precipitation Event Occurred	2-23-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.
 Address Battle Run Road, RD. #2, Box 227A City Triadelphia
 State West Virginia Zip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	DS6-7	DS6-7	DS6-7	DS6-7	DS6-7	DS6-7
2.	Lab Identification Number 98-	02-119	03-130	04-141	05-208	06-238	07-207
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1120	1120	1120	1120	1120	1120
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	2.3 GPM	5.9 GPM	3.3 GPM	1.9 GPM	2.16 GPM	1.55 gpm
8.	Date Above Measurements Made	2-20-98	3-10-98	4-14-98	5-22-88	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	C	C	C	C	C	C
10.	pH (Standard Units)	7.30	7.70	7.90	7.10	7.00	7.20
11.	Total Acidity (mg/l CaCO ₃)	30.0	6.40	4.80	20.0	37.0	22.0
12.	Total Alkalinity (mg/l CaCO ₃)	150.00	140.00	190.0	220.0	220.0	230.0
13.	Specific Conductivity (umhos/cm at 25 C)	400	310	450	340	400	490
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	<0.02	0.04	0.02	0.02	<0.02	<0.02
16.	Total Sulfates (mg/l)	34.0	32.0	33.0	34.0	32.0	40.0
17.	Total Iron (mg/l)	0.08	0.96	0.18	0.05	0.06	0.15
18.	Total Suspended Solids (mg/l)	<1.0	21.0	<1.0	<1.0	<1.0	<1.0
19.	Total Hardness (mg/l as CaCO ₃)	170.0	180.00	190.0	210.0	220.0	220.0
20.	Date Sampled for Analysis	2-20-98	3-10-98	4-14-98	5-22-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-20-98	3-9-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)

APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	DS6-12	DS6-12	DS6-12	DS6-12	DS6-12	DS6-12
2.	Lab Identification Number 98-	02-157	03-082	04-165	05-210	06-261	07-236
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	970	970	970	970	970	970
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	1.1 GPM	.8 GPM	.27 GPM	.23 GPM	.22 GPM	.08 GPM
8.	Date Above Measurements Made	2-24-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	F	F	F	F	F	F
10.	pH (Standard Units)	7.80	7.90	7.90	8.00	8.00	8.00
11.	Total Acidity (mg/l CaCO ₃)	9.30	5.20	0.19	5.10	5.1	7.40
12.	Total Alkalinity (mg/l CaCO ₃)	160.0	170.0	200.0	210.0	210.0	230.0
13.	Specific Conductivity (umhos/cm at 25 C)	330	360	370	380	420	460
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	<0.02	<0.02	0.02	0.02	0.02	0.02
16.	Total Sulfates (mg/l)	51.0	46.0	49.0	42.0	38.0	46.0
17.	Total Iron (mg/l)	0.09	0.10	0.07	0.07	0.14	0.10
18.	Total Suspended Solids (mg/l)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
19.	Total Hardness (mg/l as CaCO ₃)	190.0	180.00	190.0	230.0	220.0	220.0
20.	Date Sampled for Analysis	2-24-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-23-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.

Address Battle Run Road, RD. #2, Box 227A

State West Virginia

City Triadelphia

Zip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)

APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	U6-1	U6-1	U6-1	U6-1	U6-1	U6-1
2.	Lab Identification Number 98-	01-231	02-194	03-136	04-166	05-235	06-284
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	840	840	840	840	840	840
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	116 CFS	116 CFS	172 CFS	41.1 CFS	125 CFS	69 CFS
8.	Date Above Measurements Made	1-26-98	2-26-98	3-10-98	4-14-98	5-23-98	6-24-98
9.	Aquifer/Zone Identification for Well/Spring	--	--	--	--	--	--
10.	pH (Standard Units)	7.90	8.20	8.40	8.40	8.20	7.90
11.	Total Acidity (mg/l CaCO ₃)	2.80	3.40	<1.0	<0.15	3.00	3.60
12.	Total Alkalinity (mg/l CaCO ₃)	110.00	110.00	91.0	110.0	140.0	140.0
13.	Specific Conductivity (umhos/cm at 25 C)	300	260	260	330	330	380
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	0.03	0.02	0.04	0.04	0.02	0.04
16.	Total Sulfates (mg/l)	44.0	57.0	42.0	52.0	54.0	46.0
17.	Total Iron (mg/l)	0.17	0.08	0.33	0.14	0.13	0.18
18.	Total Suspended Solids (mg/l)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
19.	Total Hardness (mg/l as CaCO ₃)	150.0	150.00	130.0	150.0	190.0	190.0
20.	Date Sampled for Analysis	1-26-98	2-26-98	3-10-98	4-14-98	5-23-98	6-24-98
21.	Date Last Precipitation Event Occurred	1-22-98	2-24-98	3-9-88	4-14-98	5-19-98	6-18-98

Laboratory Name TraDet, Inc.

Address Battle Run Road, RD. #2, Box 227A

State West Virginia

City Triadelphia

Zip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	D6-1	D6-1	D6-1	D6-1	D6-1	D6-1
2.	Lab Identification Number 98-	01-228	02-195	03-137	04-167	05-236	06-285
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH	SAMPLING		
4.	Surface Elevation for Sampling Station (msl)	840	840	840	840	840	840
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	122 CFS	121 CFS	194 CFS	52.2 CFS	125 CFS	69 CFS
8.	Date Above Measurements Made	1-26-98	2-26-98	3-10-98	4-14-98	5-23-98	6-24-98
9.	Aquifer/Zone Identification for Well/Spring	--	--	--	--	--	--
10.	pH (Standard Units)	7.70	8.20	8.40	8.40	8.20	8.00
11.	Total Acidity (mg/l CaCO ₃)	3.00	4.60	1.90	0.15	1.20	2.00
12.	Total Alkalinity (mg/l CaCO ₃)	140.00	110.00	88.0	110.0	140.0	150.0
13.	Specific Conductivity (umhos/cm at 25 C)	320	260	260	340	320	390
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	<0.02	<0.02	0.04	0.04	0.02	0.03
16.	Total Sulfates (mg/l)	45.0	55.0	42.0	50.0	53.0	48.0
17.	Total Iron (mg/l)	0.17	0.08	0.28	0.09	0.13	0.16
18.	Total Suspended Solids (mg/l)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
19.	Total Hardness (mg/l as CaCO ₃)	170.0	140.00	110.0	140.0	180.0	200.0
20.	Date Sampled for Analysis	1-26-98	2-26-98	3-10-98	4-14-98	5-23-98	6-24-98
21.	Date Last Precipitation Event Occurred	1-22-98	2-24-98	3-9-88	4-14-98	5-19-98	6-18-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227ACity TriadelphiaState West VirginiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	D6-1		U6-1			
2.	Lab Identification Number 98-	07-234		07-233			
3.	High (H) / Low (L) Designation (if applicable)	SUPPLEMENTAL					
4.	Surface Elevation for Sampling Station (msl)	840		840			
5.	Depth of Well Below Land Surface (feet)	--		--			
6.	Static Water Level of Well Below Land Surface (feet)	--		--			
7.	Flow for Spring and Stream (gpm or cfs)	63 CFS		63 CFS			
8.	Date Above Measurements Made	7-17-98		7-17-98			
9.	Aquifer/Zone Identification for Well/Spring	--		--			
10.	pH (Standard Units)	8.50		8.50			
11.	Total Acidity (mg/l CaCO ₃)	2.20		3.40			
12.	Total Alkalinity (mg/l CaCO ₃)	140.00		150.0			
13.	Specific Conductivity (umhos/cm at 25 C)	380		360			
14.	Total Dissolved Solids (mg/l)	--		--			
15.	Total Manganese (mg/l)	0.03		0.03			
16.	Total Sulfates (mg/l)	64.0		61.0			
17.	Total Iron (mg/l)	0.06		<0.02			
18.	Total Suspended Solids (mg/l)	<1.0		<1.0			
19.	Total Hardness (mg/l as CaCO ₃)	180.0		180.0			
20.	Date Sampled for Analysis	7-17-98		7-17-98			
21.	Date Last Precipitation Event Occurred	7-15-98		7-15-98			

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227ACity TriadelphiaState West VirginiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	U6-2	U6-2	U6-2	U6-2	U6-2	U6-2
2.	Lab Identification Number 98-	01-232	03-092	04-153	05-219	06-257	07-225
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1150	1150	1150	1150	1150	1150
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	.5 CFS	.1 CFS	.03 CFS	.002 FCS	.009 CFS	.008 CFS
8.	Date Above Measurements Made	1-26-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	--	--	--	--	--	--
10.	pH (Standard Units)	7.80	7.80	7.70	7.70	7.70	8.30
11.	Total Acidity (mg/l CaCO ₃)	4.30	5.00	6.90	5.30	4.90	5.40
12.	Total Alkalinity (mg/l CaCO ₃)	130.00	140.00	180.0	200.0	200.0	230.0
13.	Specific Conductivity (umhos/cm at 25 C)	280	280	300	350	410	440
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	<0.02	<0.02	0.04	0.07	0.11	0.02
16.	Total Sulfates (mg/l)	33.0	32.0	31.0	26.0	28.0	32.0
17.	Total Iron (mg/l)	0.12	0.13	0.24	0.44	1.10	0.19
18.	Total Suspended Solids (mg/l)	<1.0	<1.0	<1.0	6.0	53.0	<1.0
19.	Total Hardness (mg/l as CaCO ₃)	150.0	130.00	200.0	210.0	220.0	250.0
20.	Date Sampled for Analysis	1-26-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	1-22-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)

APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	D6-2	D6-2	D6-2	D6-2	D6-2	D6-2
2.	Lab Identification Number 98-	02-193	03-083	04-164	05-234	06-262	07-235
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	930	930	930	930	930	930
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	.02 CFS	.21 CFS	.1 CFS	.04 CFS	.05 CFS	.08 CFS
8.	Date Above Measurements Made	2-26-98	3-6-98	4-14-98	5-23-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	--	--	--	--	--	--
10.	pH (Standard Units)	8.30	8.30	8.20	8.00	7.60	7.80
11.	Total Acidity (mg/l CaCO ₃)	4.60	2.50	2.10	3.00	5.70	8.20
12.	Total Alkalinity (mg/l CaCO ₃)	170.00	160.00	200.0	220.0	200.0	230.0
13.	Specific Conductivity (umhos/cm at 25 C)	410	400	500	560	450	660
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	0.05	0.02	0.04	0.09	0.04	0.13
16.	Total Sulfates (mg/l)	95.0	82.0	110.0	120.0	57.0	140.0
17.	Total Iron (mg/l)	<0.05	0.08	0.16	0.33	0.07	1.60
18.	Total Suspended Solids (mg/l)	<1.0	<1.0	<1.0	5.30	<1.0	47.0
19.	Total Hardness (mg/l as CaCO ₃)	210.0	200.00	250.0	300.0	240.0	290.0
20.	Date Sampled for Analysis	2-26-98	3-6-98	4-14-98	5-23-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-24-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.

Address Battle Run Road, RD. #2, Box 227A

City Triadelphia

State West Virginia

Zip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)

APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	U6-7	U6-7	U6-7	U6-7	U6-7	U6-7
2.	Lab Identification Number 98-	02-085	03-128	04-144	05-227	06-245	07-214
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1170	1170	1170	1170	1170	1170
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	.03 CFS	.03 CFS	.008 CFS	.0007 CFS	.02 CFS	.0003 CFS
8.	Date Above Measurements Made	2-11-98	3-10-98	4-14-98	5-22-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	--	--	--	--	--	--
10.	pH (Standard Units)	7.80	7.20	8.50	7.30	7.40	7.20
11.	Total Acidity (mg/l CaCO ₃)	6.40	4.60	<1.0	10.0	12.0	18.0
12.	Total Alkalinity (mg/l CaCO ₃)	73.00	62.00	68.0	82.0	79.0	87.0
13.	Specific Conductivity (umhos/cm at 25 C)	210	180	150	160	210	200
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	0.20	0.23	0.22	0.38	0.30	0.41
16.	Total Sulfates (mg/l)	25.0	13.0	22.0	21.0	18.0	16.0
17.	Total Iron (mg/l)	0.37	2.70	1.10	1.10	1.10	1.60
18.	Total Suspended Solids (mg/l)	5.0	56.0	13.0	19.0	7.3	16.0
19.	Total Hardness (mg/l as CaCO ₃)	120.0	80.00	70.0	70.0	80.0	80.0
20.	Date Sampled for Analysis	2-11-98	3-10-98	4-14-98	5-22-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-11-98	3-9-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.

Address Battle Run Road, RD. #2, Box 227A

State West Virginia

City Triadelphia

Zip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	U6-8	U6-8	U6-8	U6-8	U6-8	U6-8
2.	Lab Identification Number 98-	02-064	03-131	04-142	05-229	06-243	07-212
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1140	1140	1140	1140	1140	1140
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	.02 CFS	.01 CFS	.003 CFS	.0006 CFS	.006 CFS	.005 CFS
8.	Date Above Measurements Made	2-11-98	3-10-98	4-14-98	5-22-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	--	--	--	--	--	--
10.	pH (Standard Units)	7.80	7.80	8.40	8.20	7.90	7.60
11.	Total Acidity (mg/l CaCO ₃)	10.0	5.50	2.30	7.30	5.90	12.0
12.	Total Alkalinity (mg/l CaCO ₃)	150.0	190.0	170.0	170.0	99.0	130.0
13.	Specific Conductivity (umhos/cm at 25 C)	340	310	400	290	230	280
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	0.72	0.47	0.30	0.32	0.07	0.45
16.	Total Sulfates (mg/l)	25.0	21.0	30.0	19.0	16.0	13.0
17.	Total Iron (mg/l)	0.75	5.00	3.00	0.64	0.73	1.80
18.	Total Suspended Solids (mg/l)	12.0	72.0	38.0	6.0	17.0	15.0
19.	Total Hardness (mg/l as CaCO ₃)	150.0	180.00	180.0	200.0	100.0	130.0
20.	Date Sampled for Analysis	2-11-98	3-10-98	4-14-98	5-22-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-11-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227ACity TriadelphiaState West VirginiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	U6-9	U6-9	U6-9	U6-9	U6-9	U6-9
2.	Lab Identification Number 98-	02-142	03-085	04-163	05-223	06-280	07-232
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	940	940	940	940	940	940
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	.01 CFS	.004 CFS	.005 CFS	.005 CFS	.003 CFS	.002 CFS
8.	Date Above Measurements Made	2-23-98	3-6-98	4-14-98	5-22-98	6-24-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	--	--	--	--	--	--
10.	pH (Standard Units)	8.00	6.30	7.40	7.70	6.90	7.60
11.	Total Acidity (mg/l CaCO ₃)	13.0	4.20	7.10	6.40	15.0	10.0
12.	Total Alkalinity (mg/l CaCO ₃)	23.0	27.0	38.0	150.0	46.0	150.0
13.	Specific Conductivity (umhos/cm at 25 C)	120	110	160	280	600	330
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	0.18	0.38	0.43	0.02	3.10	0.02
16.	Total Sulfates (mg/l)	27.0	24.0	23.0	30.0	20.0	33.0
17.	Total Iron (mg/l)	0.33	0.48	1.10	0.26	4.00	0.32
18.	Total Suspended Solids (mg/l)	<1.0	3.3	7.3	6.7	51.0	12.0
19.	Total Hardness (mg/l as CaCO ₃)	50.0	40.00	50.0	170.0	80.0	130.0
20.	Date Sampled for Analysis	2-23-98	3-6-98	4-14-98	5-22-98	6-24-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-23-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	U6-10	U6-10	U6-10	U6-10	U6-10	U6-10
2.	Lab Identification Number 98-	02-134	03-086	04-159	--	06-281	07-230
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1030	1030	1030		1030	1030
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	.04 CFS	.01 CFS	.01 CFS	0	.003 CFS	.003 CFS
8.	Date Above Measurements Made	2-23-98	3-6-98	4-14-98		6-24-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	--	--	--	--	--	--
10.	pH (Standard Units)	7.70	7.60	8.10		7.10	8.00
11.	Total Acidity (mg/l CaCO ₃)	5.80	8.70	<0.15		12.0	10.0
12.	Total Alkalinity (mg/l CaCO ₃)	93.0	90.0	140.0		210.0	220.0
13.	Specific Conductivity (umhos/cm at 25 C)	160	230	330		520	520
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	0.02	<0.02	0.02		0.20	0.10
16.	Total Sulfates (mg/l)	36.0	36.0	49.0		66.0	46.0
17.	Total Iron (mg/l)	0.05	0.20	0.09		0.90	0.40
18.	Total Suspended Solids (mg/l)	<1.0	4.0	<1.0		17.0	5.30
19.	Total Hardness (mg/l as CaCO ₃)	100.0	120.00	150.0		270.0	250.0
20.	Date Sampled for Analysis	2-23-98	3-6-98	4-14-98		6-24-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-23-98	3-3-98	4-14-98		6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	U6-11	U6-11	U6-11	U6-11	U6-11	U6-11
2.	Lab Identification Number 98-	02-135	03-089	04-158	05-218	06-282	07-226
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1080	1080	1080	1080	1080	1080
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	.01 CFS	.005 CFS	.001 CFS	.0003 CFS	.005 CFS	.007 CFS
8.	Date Above Measurements Made	2-23-98	3-6-98	4-14-98	5-22-98	6-24-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	--	--	--	--	--	--
10.	pH (Standard Units)	7.80	7.70	7.60	7.80	7.70	8.20
11.	Total Acidity (mg/l CaCO ₃)	6.00	3.20	4.40	5.70	4.10	2.40
12.	Total Alkalinity (mg/l CaCO ₃)	140.0	140.0	180.0	210.0	200.0	220.0
13.	Specific Conductivity (umhos/cm at 25 C)	260	330	400	420	510	490
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	<0.02	<0.02	0.02	0.02	0.02	<0.02
16.	Total Sulfates (mg/l)	62.0	62.0	70.0	70.0	62.0	77.0
17.	Total Iron (mg/l)	0.08	0.15	<0.05	0.13	0.16	0.34
18.	Total Suspended Solids (mg/l)	<1.0	4.0	27.0	2.70	<1.0	<1.0
19.	Total Hardness (mg/l as CaCO ₃)	160.0	180.00	210.0	170.0	230.0	310.0
20.	Date Sampled for Analysis	2-23-98	3-6-98	4-14-98	5-22-98	6-24-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-23-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	U6-12	U6-12	U6-12	U6-12	U6-12	U6-12
2.	Lab Identification Number 98-	02-136	03-090	04-157	05-215	06-260	07-227
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	990	990	990	990	990	990
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	.01 CFS	.007 CFS	.004 CFS	.03 CFS	.03 CFS	.02 CFS
8.	Date Above Measurements Made	2-23-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	--	--	--	--	--	--
10.	pH (Standard Units)	7.80	7.80	7.90	7.80	7.80	8.00
11.	Total Acidity (mg/l CaCO ₃)	5.80	4.00	4.20	5.90	4.30	2.80
12.	Total Alkalinity (mg/l CaCO ₃)	130.0	140.0	160.0	200.0	190.0	210.0
13.	Specific Conductivity (umhos/cm at 25 C)	260	290	400	330	420	490
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	0.02	<0.02	0.03	0.03	0.02	<0.02
16.	Total Sulfates (mg/l)	75.0	61.0	70.0	98.0	70.0	78.0
17.	Total Iron (mg/l)	0.19	0.11	0.55	0.14	0.24	0.06
18.	Total Suspended Solids (mg/l)	<1.0	2.7	29.0	<1.0	3.3	<1.0
19.	Total Hardness (mg/l as CaCO ₃)	170.0	180.00	210.0	260.0	270.0	250.0
20.	Date Sampled for Analysis	2-23-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-23-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	U6-13	U6-13	U6-13	U6-13	U6-13	U6-13
2.	Lab Identification Number 98-	02-132	03-079	--	--	06-254	--
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1130	1130	1130	1130	1130	1130
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	.02 GPM	.001 CFS	DRY	DRY	.0001 CFS	DRY
8.	Date Above Measurements Made	2-23-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	--	--	--	--	--	--
10.	pH (Standard Units)	7.80	8.40			8.80	
11.	Total Acidity (mg/l CaCO ₃)	4.80	7.00			5.10	
12.	Total Alkalinity (mg/l CaCO ₃)	85.0	88.0			69.0	
13.	Specific Conductivity (umhos/cm at 25 C)	110	180			150	
14.	Total Dissolved Solids (mg/l)	--	--		--	--	--
15.	Total Manganese (mg/l)	0.14	0.13			0.09	
16.	Total Sulfates (mg/l)	33.0	13.0			12.0	
17.	Total Iron (mg/l)	3.80	2.60			0.60	
18.	Total Suspended Solids (mg/l)	20.0	22.0			1.30	
19.	Total Hardness (mg/l as CaCO ₃)	100.0	90.0			70.0	
20.	Date Sampled for Analysis	2-23-98	3-6-98	N/A	N/A	6-23-98	N/A
21.	Date Last Precipitation Event Occurred	2-23-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	U6-13A	U6-13A	U6-13A	U6-13A	U6-13A	U6-13A
2.	Lab Identification Number 98-	02-170	03-078	04-150	05-217	06-251	07-220
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1135	1135	1135	1135	1135	1135
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	.07 CFS	.1 CFS	.002 CFS	.009 CFS	.02 CFS	.01 CFS
8.	Date Above Measurements Made	2-25-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	--	--	--	--	--	--
10.	pH (Standard Units)	7.70	7.70	7.50	7.90	7.60	8.10
11.	Total Acidity (mg/l CaCO ₃)	14.0	6.80	6.20	5.90	7.60	5.60
12.	Total Alkalinity (mg/l CaCO ₃)	140.0	140.0	190.0	180.0	180.0	210.0
13.	Specific Conductivity (umhos/cm at 25 C)	270	290	340	280	380	430
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	0.29	0.27	0.08	0.23	0.18	0.12
16.	Total Sulfates (mg/l)	30.0	40.0	26.0	42.0	28.0	28.0
17.	Total Iron (mg/l)	0.22	0.26	0.53	1.40	0.23	1.40
18.	Total Suspended Solids (mg/l)	<1.0	<1.0	3.5	24.0	<1.0	<1.0
19.	Total Hardness (mg/l as CaCO ₃)	160.0	160.00	190.0	200.0	180.0	200.0
20.	Date Sampled for Analysis	2-25-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-24-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	U6-14	U6-14	U6-14	U6-14	U6-14	U6-14
2.	Lab Identification Number 98-	02-171	03-077	04-149	05-212	06-250	07-219
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1155	1155	1155	1155	1155	1155
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	.04 CFS	.009 CFS	.004 CFS	.003 CFS	.09 CFS	.006 CFS
8.	Date Above Measurements Made	2-25-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	--	--	--	--	--	--
10.	pH (Standard Units)	7.70	7.80	7.40	7.40	7.40	7.70
11.	Total Acidity (mg/l CaCO ₃)	13.0	13.0	14.0	14.0	12.0	14.0
12.	Total Alkalinity (mg/l CaCO ₃)	210.0	210.0	240.0	260.0	260.0	200.0
13.	Specific Conductivity (umhos/cm at 25 C)	390	400	400	450	500	500
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	0.03	0.02	0.07	0.17	0.24	0.51
16.	Total Sulfates (mg/l)	48.0	38.0	36.0	29.0	27.0	28.0
17.	Total Iron (mg/l)	0.41	0.21	0.27	0.59	0.36	0.25
18.	Total Suspended Solids (mg/l)	6.0	<1.0	4.7	15.0	<1.0	<1.0
19.	Total Hardness (mg/l as CaCO ₃)	240.0	230.00	250.0	260.0	260.0	240.0
20.	Date Sampled for Analysis	2-25-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-24-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	U6-15	U6-15	U6-15	U6-15	U6-15	U6-15
2.	Lab Identification Number 98-	02-172	03-076	04-148	05-216	06-249	07-218
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1155	1155	1155	1155	1155	1155
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	.05 CFS	.01 CFS	.012 CFS	.006 CFS	.09 CFS	.008 CFS
8.	Date Above Measurements Made	2-25-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	--	--	--	--	--	--
10.	pH (Standard Units)	7.70	7.90	8.10	8.00	7.80	8.40
11.	Total Acidity (mg/l CaCO ₃)	10.0	5.10	4.00	3.00	6.50	5.40
12.	Total Alkalinity (mg/l CaCO ₃)	150.0	150.0	190.0	200.0	210.0	230.0
13.	Specific Conductivity (umhos/cm at 25 C)	280	300	330	310	420	470
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	0.04	<0.02	0.44	0.03	0.30	0.03
16.	Total Sulfates (mg/l)	42.0	33.0	29.0	32.0	32.0	36.0
17.	Total Iron (mg/l)	0.47	0.22	0.50	0.26	5.70	0.87
18.	Total Suspended Solids (mg/l)	23.0	3.3	6.7	2.7	<1.0	13.0
19.	Total Hardness (mg/l as CaCO ₃)	160.0	170.00	200.0	230.0	250.0	230.0
20.	Date Sampled for Analysis	2-25-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-24-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	U6-16	U6-16	U6-16	U6-16	U6-16	U6-16
2.	Lab Identification Number 98-	02-173	03-075	04-147	05-209	06-248	07-217
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1160	1160	1160	1160	1160	1160
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	.005 CFS	.06 CFS	.005 CFS	.007 CFS	.005 CFS	.004 CFS
8.	Date Above Measurements Made	2-25-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	--	--	--	--	--	--
10.	pH (Standard Units)	8.00	8.30	8.20	8.00	7.70	8.30
11.	Total Acidity (mg/l CaCO ₃)	18.0	16.0	7.30	9.20	10.0	10.0
12.	Total Alkalinity (mg/l CaCO ₃)	260.0	240.0	230.0	260.0	250.0	240.0
13.	Specific Conductivity (umhos/cm at 25 C)	420	460	500	380	510	470
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	0.08	0.06	0.10	0.29	0.12	0.22
16.	Total Sulfates (mg/l)	48.0	39.0	33.0	35.0	35.0	40.0
17.	Total Iron (mg/l)	0.93	0.61	1.20	5.20	1.20	3.80
18.	Total Suspended Solids (mg/l)	27.0	25.0	47.0	130.0	36.0	120.0
19.	Total Hardness (mg/l as CaCO ₃)	280.0	270.00	260.0	290.0	290.0	300.0
20.	Date Sampled for Analysis	2-25-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-24-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227ACity TriadelphiaState West VirginiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14A
(HYDROLOGIC MEASUREMENTS AND ANALYSES)APPLICANT THE OHIO VALLEY COAL COMPANY

D-0360-8

1.	Identification No. of sampling Station from Hydrology Map	U6-17	U6-17	U6-17	U6-17	U6-17	U6-17
2.	Lab Identification Number 98-	02-174	03-074	04-146	05-213	06-247	07-216
3.	High (H) / Low (L) Designation (if applicable)			SIX MONTH SAMPLING			
4.	Surface Elevation for Sampling Station (msl)	1160	1160	1160	1160	1160	1160
5.	Depth of Well Below Land Surface (feet)	--	--	--	--	--	--
6.	Static Water Level of Well Below Land Surface (feet)	--	--	--	--	--	--
7.	Flow for Spring and Stream (gpm or cfs)	.02 CFS	.02 CFS	.008 CFS	.009 CFS	.007 CFS	.002 CFS
8.	Date Above Measurements Made	2-25-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
9.	Aquifer/Zone Identification for Well/Spring	--	--	--	--	--	--
10.	pH (Standard Units)	7.70	7.80	7.60	7.60	7.30	7.90
11.	Total Acidity (mg/l CaCO ₃)	9.90	13.0	5.60	9.20	11.0	12.0
12.	Total Alkalinity (mg/l CaCO ₃)	140.0	150.0	160.0	180.0	190.0	200.0
13.	Specific Conductivity (umhos/cm at 25 C)	300	310	380	320	400	400
14.	Total Dissolved Solids (mg/l)	--	--	--	--	--	--
15.	Total Manganese (mg/l)	0.04	0.02	0.08	0.50	0.50	0.97
16.	Total Sulfates (mg/l)	43.0	36.0	37.0	47.0	32.0	32.0
17.	Total Iron (mg/l)	0.05	0.10	0.17	0.42	0.30	0.66
18.	Total Suspended Solids (mg/l)	<1.0	<1.0	4.0	4.0	<1.0	17.0
19.	Total Hardness (mg/l as CaCO ₃)	160.0	160.00	190.0	190.0	200.0	210.0
20.	Date Sampled for Analysis	2-25-98	3-6-98	4-14-98	5-22-98	6-23-98	7-17-98
21.	Date Last Precipitation Event Occurred	2-24-98	3-3-98	4-14-98	5-19-98	6-18-98	7-15-98

Laboratory Name TraDet, Inc.Address Battle Run Road, RD. #2, Box 227AState West VirginiaCity TriadelphiaZip 26059

NOTE: If information required by items 5, 6, and 9 is unobtainable, submit as an addendum to Attachment 14A a statement giving the reasons why the information is unobtainable.

NOTE: For each sample provide data for either item 13 or item 14

**OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION**

**ATTACHMENT 14D
(SURFACE WATER BODIES/PUBLIC WATER SUPPLIES)**

Applicant's Name THE OHIO VALLEY COAL COMPANY

D-0360-8

Surface Water/ Public Supply Identification #	Type of Surface Water/Public Supply	Name of Owner of Surface Water/ Public Supply	Known Uses of Surface Water/ Public Supply
U6-1 TO D6-1	PERENNIAL	SEE MAP	NONE
U6-2 TO D6-2	PERENNIAL	SEE MAP	FORMERLY AGRICULTURAL, CURRENTLY NONE
U6-8	INTERMITTENT	SEE MAP	NONE
U6-9	INTERMITTENT	SEE MAP	NONE
U6-10	INTERMITTENT	SEE MAP	NONE
U6-11	INTERMITTENT	SEE MAP	NONE
U6-12	INTERMITTENT	SEE MAP	NONE
U6-13	INTERMITTENT	SEE MAP	NONE
U6-13A	PERENNIAL	SEE MAP	NONE
U6-14	INTERMITTENT	SEE MAP	NONE
U6-15	INTERMITTENT	SEE MAP	NONE

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 14D
(SURFACE WATER BODIES/PUBLIC WATER SUPPLIES)Applicant's Name THE OHIO VALLEY COAL COMPANYD-0360-8

Surface Water/ Public Supply Identification #	Type of Surface Water/Public Supply	Name of Owner of Surface Water/ Public Supply	Known Uses of Surface Water/ Public Supply
U6-16 & U6-17	INTERMITTENT	SEE MAP	NONE
U6-7	PERENNIAL	SEE MAP	NONE
S6-10	INTERMITTENT STREAM	SEE MAP	NONE

ADDENDUM TO ATTACHMENTS 14A, 14C AND 14D
THE OHIO VALLEY COAL COMPANY

LISTING OF STATE PLANE COORDINATES FOR HYDRO SITES:

HYDROLOGY SITE	STATE PLANE COORDINATES	
	Y	X
S6-5	708,027	2,422,492
S6-10	703,665	2,421,377
S6-11	703,399	2,420,477
S6-13	701,085	2,421,870
S6-14	702,959	2,419,835
S6-15	703,663	2,419,648
S6-16	704,273	2,420,006
S6-17	704,362	2,420,151
S6-18	705,765	2,421,561
S6-19	706,333	2,424,145
S6-20	707,239	2,424,059
S6-21	707,921	2,423,154
S6-22	708,043	2,423,116
DS6-6	701,751	2,421,730
DS6-7	708,252	2,422,480
DS6-12	701,502	2,422,784
W6-5	708,396	2,420,740
W6-6	708,409	2,420,990
DW6-4	708,306	2,420,721
D6-1	700,262	2,422,969
D6-2	701,611	2,422,931
U6-1	700,269	2,421,759
U6-2	704,043	2,420,210
U6-7	707,929	2,421,235
U6-8	707,257	2,422,492
U6-9	700,773	2,421,889
U6-10	701,427	2,420,798
U6-11	701,949	2,419,840
U6-12	702,282	2,419,476
U6-13	703,000	2,421,504
U6-13A	707,098	2,419,531
U6-14	707,260	2,419,960
U6-15	707,175	2,420,390
U6-16	706,756	2,421,041
U6-17	706,692	2,421,157
W-1	700,464	2,425,459
W-2	698,730	2,423,752
D-1	697,833	2,424,695
D-2	698,491	2,423,765
D-3	698,756	2,424,417
U-1	698,827	2,423,687

- D. (3) Based on the data listed on Attachment 14A, and other information submitted with this application, identify the seasonal variations in water quality and quantity for the streams identified in Part 2, D(2).

N/A, SIX MONTH SAMPLING

E. HYDROLOGIC DETERMINATION-Permit, Shadow Area, and Adjacent Area

Based on the information submitted in response to items B, C, and D in this part of the permit application, submit an addendum describing the probable hydrologic consequences of this proposed underground mining operation on the hydrologic regime of the proposed permit area, shadow area, and adjacent area. The description shall include findings on each of the following items:

- (1) The consequences of the proposed operation on the contents of total suspended and dissolved solids, total iron, total manganese, acidity, and pH.
 - (2) Whether adverse impacts may occur to the hydrologic balance;
 - (3) The impact the proposed operation will have on:
 - (a) sediment yield from the disturbed area,
 - (b) flooding and stream flow alteration or diminution,
 - (c) ground water and surface water availability.
- SEE ADDENDUM TO PART 2, ITEM E(1,2,3) AND
P.T.I., ENGINEERING REPORT, PAGE 15, ITEM 7.3

F. ALTERNATIVE WATER SUPPLY INFORMATION-Permit, Shadow Area and Adjacent Area

- (1) Based on the response in Part 2, item E, submit an addendum identifying the extent to which the proposed coal mining activities may proximately result in contamination, diminution, or interruption of an underground or surface source of water within the proposed permit area, shadow area, and adjacent area that is used for domestic, agricultural, industrial, or other legitimate use.
SEE ADDENDUM TO PART 2, ITEM F (1 & 2), PAGE 18
- (2) If contamination, diminution, or interruption may result, submit an addendum identifying the alternative sources of water supply that could be developed to replace the existing sources including information on water availability and suitability of alternative sources for existing pre-mining uses and postmining land uses.
SEE ADDENDUM TO PART 2, ITEM F (1 & 2), PAGE 18

ADDENDUM TO PART 2, PAGE 18, ITEM E(1,2,3)
THE OHIO VALLEY COAL COMPANY

Quarterly monitoring located approximately 2600' to 3950' from the southeastern corner of the proposed adjacent area permit limits, conducted for original Permit D-0360, shows the following effluent parameter ranges. The ranges represent monitoring data dating back to September, 1980.

Ground water; pH has remained neutral between 7.90 and 7.00. Acidity has ranged between 0 and 31, while Alkalinity has fluctuated slightly between 240 and 340. Iron shows a greater fluctuation between 8.00 and 0.05. The same is true for Manganese ranges with a high of 1.10, a low of 0.01, and one analysis with 0.00 manganese present. The same is true for Total Suspended Solids ranging from 160 to <1.0 to 0.0. Hardness ranges from 850 to 220, and Sulfates from 670 to 74. Specific Conductance had a high of 1500 and a low of 580, while nitrates ranged from 0.18 to 0.00.

Surface water; pH has also remained neutral for surface water between 8.70 and 7.60. Acidity has stayed between 26.0 and 4.0, while Alkalinity has ranged from 420 to 110. Iron shows a greater fluctuation between 2.39 and 0.02. Manganese ranged between 0.82 and 0.02. Total Suspended Solids have ranged between 187 and 0. Hardness ranges from 550 to 150, and Sulfates from 460 to 45. Specific Conductance shows fairly large fluctuations between 1200 and 320, while Nitrates stayed between 0.76 and 0.12.

The majority of highest values for surface water parameters including Acidity, Specific Conductance, Sulfates and Hardness occurred during August, 1997; this could possibly be the result of unusually high rainfall (>6.0 inches) during this normally dry month. These values have since declined. Highest values for iron, manganese, T.S.S. and Alkalinity occurred during the period from 1980 to 1982.

High and low values for all parameters in ground water monitoring have shown no definitive trends between 1982 and the present.

Parameter ranges can be expected to mirror those shown above due to the fact that the proposed adjacent area will, by nature, have a very similar influence on ground and surface water.

Based on six months of sampling conducted on surface and ground water, quality is fair. Surface and ground water quantities, as well as anticipated impacts to same are addressed in the Engineers Report, Page 15, Section 7.3 and the Addendum to Part 3, Item G(5), Buffer Zone Variance Request.

Disturbance, drainage controls, and reclamation of borrow areas located north of the proposed refuse disposal site are discussed in Addendum to Part 3, Item D(1-4), and Addendum to Part 3, Item G(5), buffer zone variance request. The minimal disturbance of the north borrow areas will have no impact on the hydrologic balance.

ADDENDUM TO PART 2, ITEM E(1,2,3), THE OHIO VALLEY COAL COMPANY

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINES AND RECLAMATIONQUARTERLY MONITORING REPORT
(SUBMIT IN QUADRUPLICATE)

PERMITTEE:

THE OHIO VALLEY COAL COMPANY

PERMIT NO. D-0360

 X 1ST QTR 2ND QTR 3RD QTR 4TH QTR

1998

 PRE-MINING X MINING POST-MINING

MONITORING SITE IDENTIFICATION NUMBER	W-1	W-2	U-1	D-1	D-2	D-3
SURFACE ELEVATION OF MONITORING SITE	835	950	840	800	835	830
DEPTH BELOW LAND SURFACE	15'	unk	-	-	-	-
STATIC WATER LEVEL BELOW LAND SURFACE	13'	26'	-	-	-	-
DISCHARGE (CFS/GPM)	-	-	110.98 CFS	124.43 CFS	0.27 CFS	0.32 CFS
DATE MEASURED	02/10/98	02/10/98	02/10/98	02/10/98	02/10/98	02/10/98
PH (SU)	7.40	7.80	7.80	7.80	8.00	7.90
TOTAL ACIDITY (MG/L CaCO ₃)	26	16	8.6	8.2	9.7	9.9
TOTAL ALKALINITY (MG/L CaCO ₃)	330	260	110	110	170	190
TOTAL IRON (MG/L)	0.23	0.22	0.11	0.11	0.1	0.1
TOTAL MANGANESE (MG/L)	0	0.43	0.04	0.03	0.09	0.07
TOTAL SUSPENDED SOLIDS (MG/L)	6	0	0	0	0	0
TOTAL HARDNESS (MG/L CaCO ₃)	400	290	330	150	260	320
TOTAL SULFATE (MG/L)	160	87	87	74	130	210
SPECIFIC CONDUCTANCE (AT 25° C IN μ MHO/CM)	790	610	390	360	560	710
NITRATES (MG/L)	0	0	0.37	0.39	0	0

PERMITTEE'S SIGNATURE

David L. Bartsch

DATE

03/31/98

LABORATORY NAME:

TRADET, INC.

ANALYST'S SIGNATURE

DATE

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINES AND RECLAMATIONQUARTERLY MONITORING REPORT
(SUBMIT IN QUADRUPLICATE)

PERMITTEE:

THE OHIO VALLEY COAL COMPANY

PERMIT NO. D-0360

 1ST QTR 2ND QTR 3RD QTR X 4TH QTR PRE-MINING X MINING POST-MINING

MONITORING SITE IDENTIFICATION NUMBER	W-1	W-2	U-1	D-1	D-2	D-3
SURFACE ELEVATION OF MONITORING SITE	835	950	840	800	835	830
DEPTH BELOW LAND SURFACE	15'	unk	-	-	-	-
STATIC WATER LEVEL BELOW LAND SURFACE	14'	30'	-	-	-	-
DISCHARGE (CFS/GPM)	-	-	36.26 CFS	39.81 CFS	0.08 CFS	0.12 CFS
DATE MEASURED	11/07/97	11/07/97	11/07/97	11/07/97	11/07/97	11/07/97
PH (SU)	7.10	7.50	8.10	8.00	8.00	8.00
TOTAL ACIDITY (MG/L CaCO ₃)	24	12	4.4	4	5.7	5.4
TOTAL ALKALINITY (MG/L CaCO ₃)	330	250	160	160	230	240
TOTAL IRON (MG/L)	0.27	1.3	0	0.1	0.14	0.14
TOTAL MANGANESE (MG/L)	0.02	1.1	0.02	0.2	0.18	0.08
TOTAL SUSPENDED SOLIDS (MG/L)	0	0	0	0	0	0
TOTAL HARDNESS (MG/L CaCO ₃)	850	290	200	200	330	400
TOTAL SULFATE (MG/L)	670	74	120	120	240	360
SPECIFIC CONDUCTANCE (AT 25° C IN μ MHO/CM)	1500	610	570	570	910	1000
NITRATES (MG/L)	0	0	0	0	0	0

PERMITTEE'S SIGNATURE

David L. Bartock

DATE

01/12/98

LABORATORY NAME:

TRADET, INC.

ANALYST'S SIGNATURE

R P W

DATE

1/13/98

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINES AND RECLAMATIONQUARTERLY MONITORING REPORT
(SUBMIT IN QUADRUPLICATE)

PERMITTEE:

THE OHIO VALLEY COAL COMPANY

PERMIT NO. D-0360

☐ 1ST QTR ☐ 2ND QTR ☒ 3RD QTR ☐ 4TH QTR☐ PRE-MINING ☒ MINING ☐ POST-MINING

MONITORING SITE IDENTIFICATION NUMBER	W-1	W-2	U-1	D-1	D-2	D-3
SURFACE ELEVATION OF MONITORING SITE	835	950	840	800	835	830
DEPTH BELOW LAND SURFACE	15'	unk	-	-	-	-
STATIC WATER LEVEL BELOW LAND SURFACE	14'	23'	-	-	-	-
DISCHARGE (CFS/GPM)	-	-	7.35 CFS	7.80 CFS	0.02 CFS	0.02 CFS
DATE MEASURED	08/08/97	08/08/97	08/08/97	08/08/97	08/08/97	08/08/97
PH (SU)	7.20	7.40	8.00	7.90	7.90	8.00
TOTAL ACIDITY (MG/L CaCO ₃)	31	18	6.7	8.4	14	12
TOTAL ALKALINITY (MG/L CaCO ₃)	320	260	160	150	250	260
TOTAL IRON (MG/L)	2.5	2.2	0.14	0.32	0.47	0.1
TOTAL MANGANESE (MG/L)	0.04	1	0.04	0.07	0.64	0.1
TOTAL SUSPENDED SOLIDS (MG/L)	160	3.3	2	1.5	0	0
TOTAL HARDNESS (MG/L CaCO ₃)	540	320	220	210	440	550
TOTAL SULFATE (MG/L)	280	82	280	270	280	460
SPECIFIC CONDUCTANCE (AT 25° C IN μ MHO/CM)	1200	610	1000	950	1000	1200
NITRATES (MG/L)	0.12	0.18	0.12	0.22	0.22	0.59

PERMITTEE'S SIGNATURE

DATE

10/14/97

LABORATORY NAME:

TRADET, INC.

ANALYST'S SIGNATURE

DATE

ADDENDUM TO PART 2, ITEM E(1,2,3,,), THE OHIO VALLEY COAL COMPANY
OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINES AND RECLAMATION

QUARTERLY MONITORING REPORT
(SUBMIT IN QUADRUPLICATE)

PERMITTEE: THE OHIO VALLEY COAL COMPANY PERMIT NO. D-0360

QUARTER (1, (2) 3, 4) YEAR 97
MINING STATUS (PRE-MINING, (MINING) POST MINING)

MONITORING SITE IDENTIFICATION NUMBER	W-1	W-2	U-1	D-1	D-2
SURFACE ELEVATION OF MONITORING SITE	950	835	840	800	835
DEPTH BELOW LAND SURFACE	15	UNKNOWN			
STATIC WATER LEVEL BELOW LAND SURFACE	13	29			
DISCHARGE (CFS/GPM)			88.32	96.88	0.40
DATE MEASURED	05/23/97	05/23/97	05/23/97	05/23/97	05/23/97
pH (SU)	7.0	7.2	8.7	8.7	8.7
TOTAL ACIDITY (MG/L CaCO ₃)	27	17	20	6.6	8.0
TOTAL ALKALINITY (MG/L CaCO ₃)	340	270	130	120	170
TOTAL IRON (MG/L)	0.64	0.52	0.26	0.14	0.19
TOTAL MANGANESE (MG/L)	<0.02	0.71	0.04	0.03	0.11
TOTAL SUSPENDED SOLIDS (MG/L)	6.0	1.2	<1.0	<1.0	<1.0
TOTAL HARDNESS (MG/L CaCO ₃)	380	310	160	170	250
TOTAL SULFATE (MG/L)	110	98	77	66	110
SPECIFIC CONDUCTANCE (AT 25°C OM μ MHO/CM)	720	580	570	370	520

PERMITTEE'S SIGNATURE

David L. Barto

DATE

07/07/97

LABORATORY NAME:

TRADET, INC.

ANALYST/S SIGNATURE

Charm Lipe

DATE

7-8-97

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINES AND RECLAMATIONQUARTERLY MONITORING REPORT
(SUBMIT IN QUADRUPLICATE)

PERMITTEE:

THE OHIO VALLEY COAL COMPANYPERMIT NO. D-0360QUARTER (1, (2), 3, 4)
MINING STATUS (PRE-MINING, MINING, POST MINING)

YEAR

97

MONITORING SITE IDENTIFICATION NUMBER	D-3				
SURFACE ELEVATION OF MONITORING SITE					
DEPTH BELOW LAND SURFACE	830				
STATIC WATER LEVEL BELOW LAND SURFACE					
DISCHARGE (CFS/GPM)	0.40				
DATE MEASURED	05/23/97				
pH (SU)	8.7				
TOTAL ACIDITY (MG/L CaCO ₃)	8.0				
TOTAL ALKALINITY (MG/L CaCO ₃)	170				
TOTAL IRON (MG/L)	0.19				
TOTAL MANGANESE (MG/L)	0.11				
TOTAL SUSPENDED SOLIDS (MG/L)	<1.0				
TOTAL HARDNESS (MG/L CaCO ₃)	250				
TOTAL SULFATE (MG/L)	110				
SPECIFIC CONDUCTANCE (AT 25°C OM μ MHO/CM)	520				

PERMITTEE'S SIGNATURE

David L. Bartlett

DATE

07/07/97

LABORATORY NAME:

TRADEL INC.

ANALYST/S SIGNATURE

Charm Lark

DATE

7-8-97

ADDENDUM TO PART 2, ITEM E(1,2,3), THE OHIO VALLEY COAL COMPANY

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONQUARTERLY MONITORING REPORT SHEETS
(SUBMIT IN QUADRUPLICATE)

PERMITTEE: THE OHIO VALLEY COAL COMPANY

PERMIT NO. D-0360

X 1ST QTR. 2ND QTR. 3RD QTR. 4TH QTR. PRE-MINING X MINING POST-MINING

MONITORING SITE IDENTIFICATION NUMBER	W-1	W-2	U-1	D-1	D-2
SURFACE ELEVATION OF MONITORING SITE	950	835	840	800	835
DEPTH BELOW LAND SURFACE	15'	unk	-	-	-
STATIC WATER LEVEL BELOW LAND SURFACE	13'	27'	-	-	-
DISCHARGE (CFS/GPM)	-	-	95.05 CFS	98.18 CFS	0.35 CFS
DATE MEASURED	2/11/97	2/11/97	2/10/97	2/10/97	2/10/97
pH (SU)	7.3	7.7	7.9	7.9	8.0
TOTAL ACIDITY (MG/L CaCO ₃)	21	13	26	12	8.6
TOTAL ALKALINITY (MG/L CaCO ₃)	340	270	120	110	170
TOTAL IRON (MG/L)	0.20	0.33	0.15	0.13	0.13
TOTAL MANGANESE (MG/L)	0.02	0.68	0.06	0.04	0.12
TOTAL SUSPENDED SOLIDS (MG/L)	4.2	<1.0	1.0	<1.0	<1.0
TOTAL HARDNESS (MG/L CaCO ₃)	400	330	170	150	260
TOTAL SULFATE (MG/L)	110	92	76	52	120
SPECIFIC CONDUCTANCE (AT 25° C IN µMHO/CM)	700	580	430	320	520
NITRATES (MG/L)	0.06	0.10	0.62	0.76	0.39

PERMITTEE'S SIGNATURE David L. Bartsch DATE 3-24-97LABORATORY NAME: TRADET, INC.ANALYST'S SIGNATURE R. W. [Signature] DATE 3/26/97

ADDENDUM TO PART 2, ITEM E(1,2,3), THE OHIO VALLEY COAL COMPANY

OHIO DEPARTMENT OF NATURAL RESOURCES

DIVISION OF RECLAMATION

QUARTERLY MONITORING REPORT SHEETS

(SUBMIT IN QUADRUPLICATE)

PERMITTEE: THE OHIO VALLEY COAL COMPANY

PERMIT NO. D-0360

X 1ST QTR. 2ND QTR. 3RD QTR. 4TH QTR. PRE-MINING X MINING POST-MINING

MONITORING SITE IDENTIFICATION NUMBER	D-3				
SURFACE ELEVATION OF MONITORING SITE	830				
DEPTH BELOW LAND SURFACE	-				
STATIC WATER LEVEL BELOW LAND SURFACE	-				
DISCHARGE (CFS/GPM)	0.38 CFS				
DATE MEASURED	2/10/97				
PH (SU)	8.0				
TOTAL ACIDITY (MG/L CaCO ₃)	7.1				
TOTAL ALKALINITY (MG/L CaCO ₃)	180				
TOTAL IRON (MG/L)	0.14				
TOTAL MANGANESE (MG/L)	0.14				
TOTAL SUSPENDED SOLIDS (MG/L)	1.2				
TOTAL HARDNESS (MG/L CaCO ₃)	330				
TOTAL SULFATE (MG/L)	160				
SPECIFIC CONDUCTANCE (AT 25° C IN μ MHO/CM)	640				
NITRATES (MG/L)	0.29				

PERMITTEE'S SIGNATURE David L. Bartlett DATE 3-24-97

LABORATORY NAME: TRADET, INC.

ANALYST'S SIGNATURE _____ DATE _____

ADDENDUM TO PART 2, ITEM E(1,2,3,)
THE OHIO VALLEY COAL COMPANY

SURFACE AND GROUND WATER QUALITY
HYDROLOGIC MEASUREMENTS AND ANALYSES

Applicant THE NACCO MINING COMPANY

Identification No. of Sampling Station from Hydrology Map	W-1	W-1	W-2	W-3		
Surface Elevation for Well/Spring	950'	950'	834.9	1067.8		
Depth of Well Below Land Surface	100'	100'	15.0'	48.2'		
Static Water Level of Well Below Land Surface	UK	UK	12.7'	40'		
Flow for Spring and Streams						
Date Above Measurements Made	9/3/82	3/5/84	2/24/84	2/24/84		
Lithology of Aquifer for Well/Spring	UK	UK	UK	UK		
pH (Standard Units)	7.3	7.9	7.4	6.9		
Total Acidity (mg/l of CaCO ₃)	0	0	0	0		
Total Alkalinity (mg/l of CaCO ₃)		330	240	100		
Total Manganese (mg/l)	.04	.04	.01	.14		
Total Iron (mg/l)		8.0	.05	1.06		
Dissolved Iron (mg/l)	.10	.08	--	---		
Total Suspended Solids (mg/l)	6.0	--	--	---		
Total Hardness (mg/l of CaCO ₃)	270	220	330	160		
Date Sampled for Analysis	9/3/82	3/5/84	2/24/84	2/6/84		

UK - Unknown

ADDENDUM TO PART 2, ITEM E(1,2,3,)
THE OHIO VALLEY COAL COMPANY
SURFACE AND GROUND WATER QUALITY
HYDROLOGIC MEASUREMENTS AND ANALYSES

Applicant The Nacco Mining Company, Powhatan Mine No. 6

Identification No. of Sampling Station from Hydrology Map	U-3	D-3	U-3	D-3	U-3	D-3
Surface Elevation for Well/Spring						
Depth of Well Below Land Surface						
Static Water Level of Well Below Land Surface						
Flow for Spring (GPM) and Streams	15	30	10	30	2	15
Date Above Measurements Made	2/18/82	2/18/82	6/24/82	6/24/82	8/19/82	8/19/82
Lithology of Aquifer for Well/Spring						

pH (Standard Units)	7.4	7.6	8.3	8.3	8.2	8.1
Total Acidity (mg/l of CaCO_3)	0	0	0	0	0	0
Total Alkalinity (mg/l of CaCO_3)	180	170	255	210	750	235
Total Manganese (mg/l)	0.03	0.16	0.08	0.04	0.11	0.02
Total Iron (mg/l)	0.70	0.45	0.21	0.11	0.34	<0.03
Dissolved Iron (1) (mg/l)	0.18	0.11	0.04	0.03	0.05	0.03
Total Suspended Solids (1) (mg/l)	42	24	11	3	10	1
Total Hardness (2) (mg/l of CaCO_3)					180	390
Date Sampled for Analysis	2/18/82	2/18/82	6/24/82	6/24/82	8/19/82	8/19/82

ADDENDUM TO PART 2, ITEM E(1,2,3,)
THE OHIO VALLEY COAL COMPANY

SURFACE AND GROUND WATER QUALITY
HYDROLOGIC MEASUREMENTS AND ANALYSES

Applicant The Nacco Mining Company, Powhatan Mine No. 6

Identification No. of Sampling Station from Hydrology Map	U-3	D-3	U-3	D-3	U-3	D-3
Surface Elevation for Well/Spring						
Depth of Well Below Land Surface						
Static Water Level of Well Below Land Surface						
Flow for Spring and Streams (GPM)	60	65	3	15	15	20
-Date Above Measurements Made	5/21/81	5/21/81	9/17/81	9/17/81	12/17/81	12/17/81
Lithology of Aquifer for Well/Spring						

pH (Standard Units)	8.3	8.3	7.9	7.7	8.1	8.0
Total Acidity (mg/l of CaCO ₃)	0	0	0	0	0	0
Total Alkalinity (mg/l of CaCO ₃)	230	280	420	275	220	210
Total Manganese (mg/l)	0.01	0.16	0.23	0.31	0.27	0.24
Total Iron (mg/l)	1.08	0.02	0.50	2.39	1.26	0.10
Dissolved Iron (1) (mg/l)	0.01	0.02	<0.02	0.03	<0.03	<0.03
Total Suspended Solids (1) (mg/l)	2	3	12	7	63	3
Total Hardness (2) (mg/l of CaCO ₃)						
Date Sampled for Analysis	5/21/81	5/21/81	9/17/81	9/17/81	12/17/81	12/17/81

ADDENDUM TO PART 2, ITEM E(1,2,3,)
THE OHIO VALLEY COAL COMPANY

SURFACE AND GROUND WATER QUALITY
HYDROLOGIC MEASUREMENTS AND ANALYSES

Applicant The Nacco Mining Company, Powhatan Mine No. 6

Identification No. of Sampling Station from Hydrology Map	U-2	D-2	U-3	D-3	U-3	D-3
Surface Elevation for Well/Spring						
Depth of Well Below Land Surface						
Static Water Level of Well Below Land Surface						
Flow for Spring (GPM) and Streams	200	250	5	10	20	40
Date Above Measurements Made	8/19/82	8/19/82	12/18/80	12/18/80	3/19/81	3/19/81
Lithology of Aquifer for Well/Spring						

pH (Standard Units)	8.1	8.2	8.0	8.1	8.2	8.0
Total Acidity (mg/l of CaCO ₃)	0	0	0	0	0	0
Total Alkalinity (mg/l of CaCO ₃)	160	165	210	190	215	180
Total Manganese (mg/l)	0.48	0.12	0.06	0.25	0.06	0.23
Total Iron (mg/l)	0.16	0.09	0.08	0.18	0.06	0.48
Dissolved Iron (1) (mg/l)	0.04	0.04	0.08	0.18	<0.03	<0.03
Total Suspended Solids (1) (mg/l)	12	8	6	6	2	20
Total Hardness (2) (mg/l of CaCO ₃)	300	365				
Date Sampled for Analysis	8/19/82	8/19/82	12/18/80	12/18/80	3/19/81	3/19/81

ADDENDUM TO PART 2, ITEM E(1,2,3)
THE OHIO VALLEY COAL COMPANY

SURFACE AND GROUND WATER QUALITY
HYDROLOGIC MEASUREMENTS AND ANALYSES

Applicant The Nacco Mining Company, Powhatan Mine No. 6

Identification No. of Sampling Station from Hydrology Map	U-2	D-2	U-2	D-2	U-2	D-2
Surface Elevation for Well/Spring						
Depth of Well Below Land Surface						
Static Water Level of Well Below Land Surface						
Flow for Spring and Streams (GPM)	160	220	400	425	200	250
Date Above Measurements Made	12/17/81	12/17/81	2/18/82	² 8/18/82	6/24/82	6/24/82
Lithology of Aquifer for Well/Spring						
pH (Standard Units)	7.8	8.3	7.4	7.6	7.9	8.2
Total Acidity (mg/l of CaCO ₃)	0	0	0	0	0	0
Total Alkalinity (mg/l of CaCO ₃)	130	150	145	170	160	185
Total Manganese (mg/l)	0.34	0.34	0.60	0.51	0.45	0.13
Total Iron (mg/l)	0.26	1.31	0.82	0.73	0.20	0.06
Dissolved Iron (1) (mg/l)	<0.03	<0.03	<0.02	<0.02	0.03	0.03
Total Suspended Solids (1) (mg/l)	3	17	20	29	4	4
Total Hardness (2) (mg/l of CaCO ₃)						
Date Sampled for Analysis	12/17/81	12/17/81	2/18/82	2/18/82	6/24/82	6/24/82

ADDENDUM TO PART 2, ITEM E(1,2,3)
THE OHIO VALLEY COAL COMPANY

SURFACE AND GROUND WATER QUALITY
HYDROLOGIC MEASUREMENTS AND ANALYSES

Applicant The Nacco Mining Company, Powhatan Mine No. 6.

Identification No. of Sampling Station from Hydrology Map	U-2	D-2	U-2	D-2	U-2	D-2
Surface Elevation for Well/Spring						
Depth of Well Below Land Surface						
Static Water Level of Well Below Land Surface						
Flow for Spring and Streams (GPM)	260	300	280	370	3	15
Date Above Measurements Made	3/19/81	3/19/81	5/21/81	5/21/81	9/17/81	9/17/81
Lithology of Aquifer for Well/Spring						

pH (Standard Units)	7.9	8.1	7.8	8.0	7.7	7.8
Total Acidity (mg/l of CaCO ₃)	0	0	0	0	0	0
Total Alkalinity (mg/l of CaCO ₃)	115	140	320	420	495	340
Total Manganese (mg/l)	0.60	0.51	0.55	0.25	0.82	0.49
Total Iron (mg/l)	0.25	0.30	0.30	0.12	1.86	0.16
Dissolved Iron (1) (mg/l)	0.03	0.04	0.02	0.04	<0.02	0.02
Total Suspended Solids (1) (mg/l)	3	8	3	3	14	1
Total Hardness (2) (mg/l of CaCO ₃)						
Date Sampled for Analysis	3/19/81	3/19/81	5/21/81	5/21/81	9/17/81	9/17/81

ADDENDUM TO APRT 2, ITEM E(1,2,3)
THE OHIO VALLEY COAL COMPANY

SURFACE AND GROUND WATER QUALITY
HYDROLOGIC MEASUREMENTS AND ANALYSES

Applicant The Narco Mining Company, Powhatan Mine No. 6

Identification No. of Sampling Station from Hydrology Map	U-1	D-1	U-1	D-1	U-2	D-2
Surface Elevation for Well/Spring						
Depth of Well Below Land Surface						
Static Water Level of Well Below Land Surface						
Flow for Spring (GPM) and Streams	N/A	N/A	N/A	N/A	40	60
Date Above Measurements Made					12/18/80	12/18/80
Lithology of Aquifer for Well/Spring						

pH (Standard Units)	8.0	8.1	7.9	8.0	7.8	7.7
Total Acidity (mg/l of CaCO ₃)	0	0	0	0	0	0
Total Alkalinity (mg/l of CaCO ₃)	170	170	180	185	110	130
Total Manganese (mg/l)	0.03	0.04	0.09	0.10	0.88	0.82
Total Iron (mg/l)	0.12	0.09	0.31	0.39	0.16	0.86
Dissolved Iron (1) (mg/l)	0.04	0.03	0.05	0.06	< 0.03	0.05
Total Suspended Solids (1) (mg/l)	7	6	17	13	< 1	5
Total Hardness (2) (mg/l of CaCO ₃)			210	225		
Date Sampled for Analysis	6/24/82	6/24/82	8/19/82	8/19/82	12/18/80	12/18/80

SURFACE AND GROUND WATER QUALITY
.....
HYDROLOGIC MEASUREMENTS AND ANALYSES

Applicant The Nacco Mining Company, Powhatan Mine No. 6

Identification No. of Sampling Station from Hydrology Map	U-1	D-1	U-1	D-1	U-1	D-1
Surface Elevation for Well/Spring						
Depth of Well Below Land Surface						
Static Water Level of Well Below Land Surface						
Flow for Spring (GPM) and Streams	N/A	N/A	N/A	N/A	N/A	N/A
Date Above Measurements Made						
Lithology of Aquifer for Well/Spring						

pH (Standard Units)	8.0	7.9	8.3	8.1	7.6	7.6
Total Acidity (mg/l of CaCO ₃)	0	0	0	0	0	0
Total Alkalinity (mg/l of CaCO ₃)	250	230	140	150	125	120
Total Manganese (mg/l)	0.06	0.02	0.32	0.06	0.24	0.07
Total Iron (mg/l)	0.32	0.27	1.39	0.13	0.53	0.38
Dissolved Iron (1) (mg/l)	0.06	0.04	<0.03	<0.03	0.06	0.11
Total Suspended Solids (1) (mg/l)	4	17	19	2	187	30
Total Hardness (2) (mg/l of CaCO ₃)						
Date Sampled for Analysis	9/17/81	9/17/81	12/17/81	12/17/81	2/18/82	2/18/82

ADDENDUM TO PART 2, ITEM E(1,2,3)
THE OHIO VALLEY COAL COMPANY

SURFACE AND GROUND WATER QUALITY
HYDROLOGIC MEASUREMENTS AND ANALYSES

Applicant The Nacco Mining Company, Powhatan Mine No. 6

Identification No. of Sampling Station from Hydrology Map	U-1	D-1	U-1	D-1	U-1	D-1
Surface Elevation for Well/Spring						
Depth of Well Below Land Surface						
Static Water Level of Well Below Land Surface						
Flow for Spring (GPM) and Streams	N/A	N/A	N/A	N/A	N/A	N/A
Date Above Measurements Made	12/18/80	12/18/80	3/19/81	3/19/81	5/21/81	5/21/81
Lithology of Aquifer for Well/Spring						

pH (Standard Units)	7.9	8.0	8.2	8.1	7.8	8.2
Total Acidity (mg/l of CaCO ₃)	0	0	0	0	0	0
Total Alkalinity (mg/l of CaCO ₃)	130	130	120	150	170	170
Total Manganese (mg/l)	0.51	0.12	0.05	0.11	0.02	0.05
Total Iron (mg/l)	0.58	0.10	0.03	0.03	0.11	0.07
Dissolved Iron (1) (mg/l)	0.04	0.06	0.03	<0.03	0.01	0.02
Total Suspended Solids (1) (mg/l)	5	<1	2	3	1	2
Total Hardness (2) (mg/l of CaCO ₃)						
Date Sampled for Analysis	12/18/80	12/18/80	3/19/81	3/19/81	5/21/81	5/21/81

WATER QUALITY LABORATORY

Project: OSM SURFACE WATER MONITORING PROGRAM - MINE NO. 6 Sampling Date: _____

9-18-80

Report To: R. McGregor Dept: Environmental Location: Main Office Date: _____

Copies To: Environmental Department File: ED-6.4.3.2

Sample Collector: G. GOKSTETER
Analyst(s): G. GOKSTETER

Remarks:

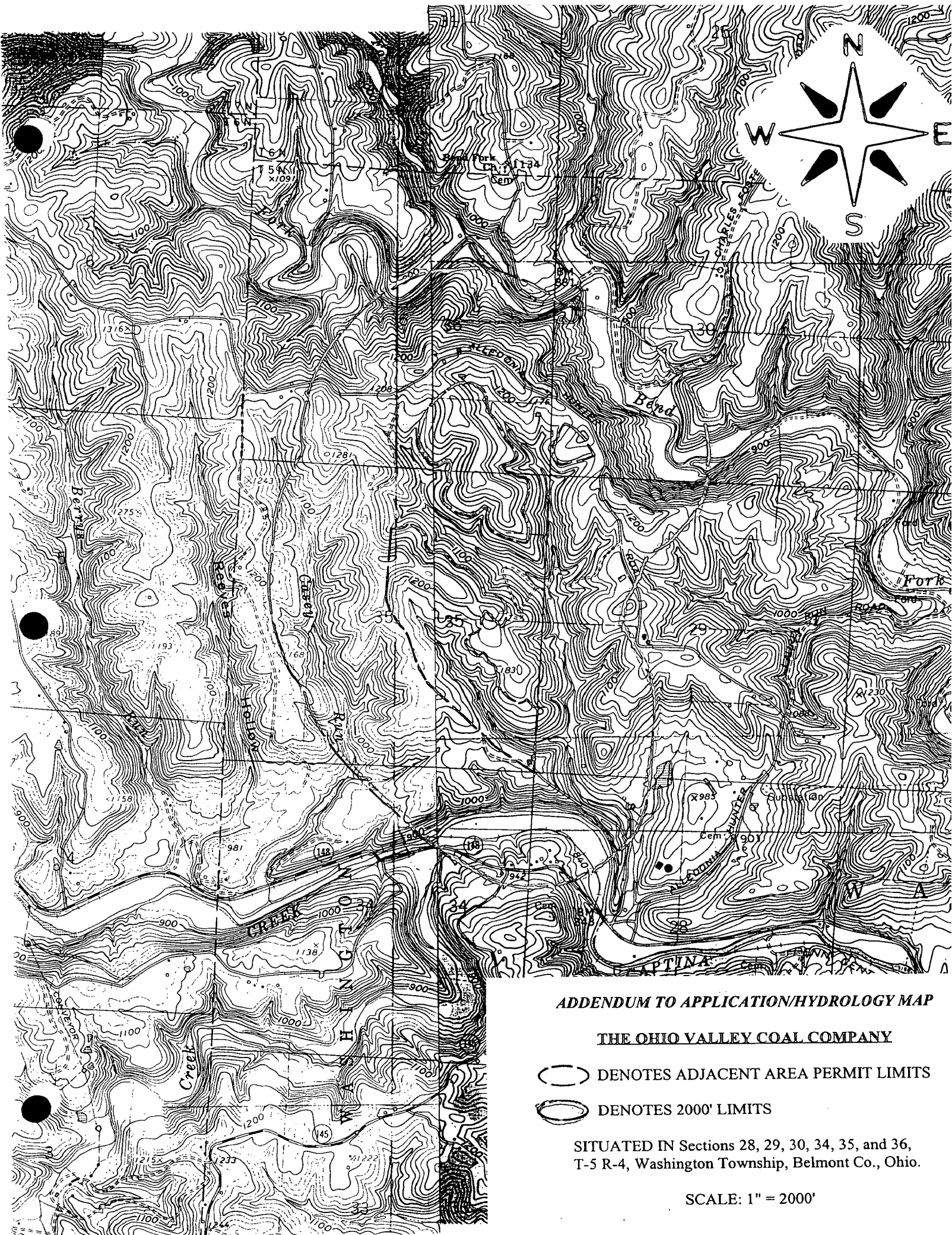
[illegible]

ADDENDUM TO PART 2, ITEM F(1 & 2) PAGE 18
THE OHIO VALLEY COAL COMPANY

ALTERNATE WATER SUPPLY INFORMATION

- (1) Legitimately-used supplies W6-5 and W6-6 are developed in Zone A, well above the proposed refuse disposal final elevation. However, the "borrow areas" extend to an elevation of 1260, and excavation of the necessary soils from these areas may have an affect on quantity in Zone A. Groundwater flow dips southeast, away from these wells, so quality should not be affected. Legitimately-used supply DS6-7 is developed in Zone C. The "borrow area" excavation will not affect quantity of this supply, furthermore, due to the southeast dip of groundwater flow, the proposed refuse disposal area will not have an affect on quality at DS6-7.
- (2) An alternate source should not be necessary at this site. Should quantity be affected at W6-5 or W6-6, wells could be extended to Zone C, which has adequate quality and quantity. Although Zone C occurs within the elevations of the proposed refuse disposal, the southeast dip of the water table will protect it from contamination.

The operator will provide a temporary supply within 48 hours following the operators investigation or upon notification of the divisions technical section, when such investigations indicate that mine related damage has occurred. In cases where exceptional circumstances prevail which prevent the operator from meeting this time frame, the operator will immediately contact the chief of the division of reclamation for a determination as to whether an extension of time is warranted. Temporary supplies will continue through any appeals process and/or until a permanent supply is provided. Temporary supplies will be in the form of trucked water and/or bottled water. The water will be stored in a 1,000 gallon plastic container, and the bottled water is self-contained.



G. LAND USE INFORMATION-Permit Area

- (1) Describe the uses of the land within the proposed permit area existing at the time of the filing of this permit application and provide a map which delineates the area of each land use.

THE PROPOSED PERMIT AREA IS COMPOSED OF 83% UNDEVELOPED LAND AND 17% PASTURELAND. SEE ADDENDUM TO PART 2, PAGE 19, ITEM G(1)

- (2) Was the land use described in item G(1) above changed within five years before the anticipated date of beginning this proposed mining operation?
_____ Yes, X No. If "yes," submit an addendum describing the historic use of the land.

- (3) Analyze the capability of the land within the proposed permit area before any mining to support a variety of uses, giving consideration to soil and foundation characteristics, topography, vegetative cover, and hydrology of the proposed permit area.

SEE ADDENDUM TO PART 2, ITEM G(3)

- (4) Analyze the productivity of the land within the proposed permit area before any mining to include average yields obtained under high level of management.

SEE ADDENDUM TO PART 2, ITEM G(4)

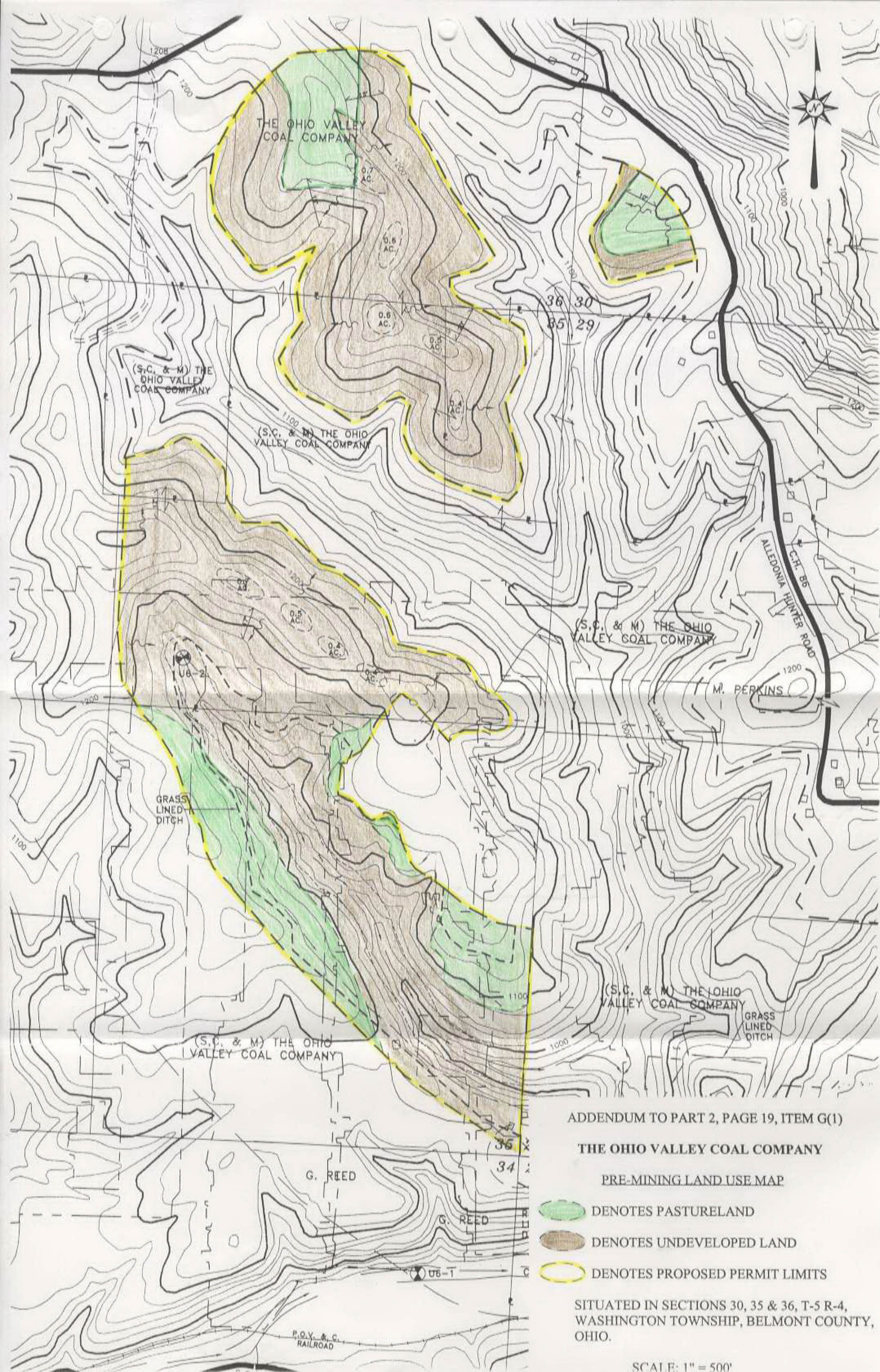
- (5) Is any land within the proposed permit area classified as prime farmland? X Yes, _____ No.

- (6) Submit an addendum describing the use of the land within the permit area, including the creation of permanent water impoundments, that is proposed to be made of the land following reclamation, including information regarding the utility and capacity of the reclaimed land to support a variety of alternative uses.

SEE ADDENDA TO PART 2, ITEM G(6)




- (7) Are there existing land use classifications under local law of the proposed permit area? _____ Yes, X No. If "yes," describe the land use classification and submit as an addendum to the permit application, the comments of the governmental agency which would have to initiate, implement, approve or authorize the proposed use of the land following reclamation. If "no," describe the sources of information on which the determination was made.

FRED BENNETT, BELMONT COUNTY ENGINEER



ADDENDUM TO PART 2, PAGE 19, ITEM G(1)

**THE OHIO VALLEY COAL COMPANY
PRE-MINING LAND USE MAP**

-  DENOTES PASTURELAND
-  DENOTES UNDEVELOPED LAND
-  DENOTES PROPOSED PERMIT LIMITS

SITUATED IN SECTIONS 30, 35 & 36, T-5 R-4,
WASHINGTON TOWNSHIP, BELMONT COUNTY,
OHIO.

SCALE: 1" = 500'

ADDENDUM TO PART 2, PAGE 19, ITEM G(3),
THE OHIO VALLEY COAL COMPANY

AFTER GIVING CONSIDERATION TO SOIL AND FOUNDATION CHARACTERISTICS, TOPOGRAPHY, VEGETATIVE COVER AND HYDROLOGY OF THE PROPOSED AREA, THE LAND COULD SUPPORT USES SUCH AS RESIDENTIAL, UNDEVELOPED RECREATIONAL, AGRICULTURAL, AND WILDLIFE HABITAT. EXAMPLES ARE SINGLE FAMILY HOUSING DUE TO THE SLOPES AND EXISTING ROADS ON AND ADJACENT TO THE AREA, PASTURELAND USED FOR LIVESTOCK GRAZING, AND WILDLIFE HABITAT DUE TO THE VEGETATIVE COVER.

ADDENDUM TO PART 2, ITEM G(4)

TABLE 5.--YIELDS PER ACRE OF CROPS AND PASTURE

[Yields are those that can be expected under a high level of management. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil]

Soil name and map symbol	Corn	Winter wheat	Oats	Grass- legume hay	Alfalfa hay	Pasture
	<u>Bu</u>	<u>Bu</u>	<u>Bu</u>	<u>Ton</u>	<u>Ton</u>	<u>AUM^a</u>
AeC----- Allegheny Variant	105	40	65	3.5	---	5.5
As----- Ashton	125	50	70	4.5	5.0	7.0
BaB, BaD, BaF----- Barkcamp	---	---	---	---	---	---
BcB----- Barkcamp	---	---	---	---	---	3.0
BcD----- Barkcamp	---	---	---	---	---	2.0
BeB----- Bethesda	---	20	40	2.0	---	3.3
BeD----- Bethesda	---	15	35	1.5	---	3.0
BhB, BhD----- Bethesda	---	---	---	---	---	2.0
BhE, BhF----- Bethesda	---	---	---	---	---	---
BsC----- Brookside	100	40	60	4.5	---	7.0
BsD----- Brookside	90	35	55	4.0	---	7.0
BsE----- Brookside	---	---	---	---	---	---
BuB----- Brookside-Urban land	---	---	---	---	---	---
BuD----- Brookside-Urban land	---	---	---	---	---	---
Cg----- Chagrin	125	45	65	4.5	5.0	7.0
ChB----- Chili	85	34	70	4.2	---	6.6
CmB----- Chili-Urban land	---	---	---	---	---	---
CuB----- Culleoka	100	32	65	4.0	---	6.0
CuC----- Culleoka	90	28	60	3.5	---	5.5
DkB----- Dekalb	80	30	55	3.5	---	5.5
DkC----- Dekalb	70	25	50	3.3	---	5.0
DkD----- Dekalb	70	25	50	3.0	---	4.5

See footnote at end of table.

ADDENDUM TO PART 2, ITEM G(4)

TABLE 5.--YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Soil name and map symbol	Corn	Winter wheat	Oats	Grass- legume hay	Alfalfa hay	Pasture
	<u>Bu</u>	<u>Bu</u>	<u>Bu</u>	<u>Ton</u>	<u>Ton</u>	<u>AUM^a</u>
DkE----- Dekalb	---	---	---	---	---	4.0
DmF----- Dekalb	---	---	---	---	---	---
Dp, Ds. Dumps						
DuB----- Duncannon-Urban land	---	---	---	---	---	---
EbB----- Elba	100	45	60	4.5	4.7	7.0
EbC----- Elba	95	40	55	4.0	4.5	6.0
EbD----- Elba	85	35	50	3.8	4.2	5.8
EbE----- Elba	---	---	---	---	---	4.0
ElB----- Elkinsville	120	48	70	4.0	4.5	6.0
ElC----- Elkinsville	110	44	65	3.6	4.3	5.8
ElD----- Elkinsville	90	36	60	3.0	4.0	4.5
FbB, FbD----- Fairpoint	---	---	---	---	---	3.0
FcB----- Fairpoint	---	25	45	2.5	---	4.0
FcD----- Fairpoint	---	20	40	2.0	---	3.0
FtA----- Fitchville	110	38	60	4.3	---	6.5
He----- Hartshorn	100	40	60	4.0	---	6.0
LeB----- Lowell	110	40	65	4.0	5.0	6.0
LeC----- Lowell	100	35	60	3.7	4.8	5.8
LeD----- Lowell	90	30	55	3.5	4.5	5.5
LeE----- Lowell	---	---	---	---	---	4.0
LeF----- Lowell	---	---	---	---	---	---
LoB----- Lowell-Westmoreland	110	38	70	3.8	4.8	5.8
LoC----- Lowell-Westmoreland	100	35	63	3.4	4.4	5.5
LoD----- Lowell-Westmoreland	90	30	58	3.3	4.3	5.0

See footnote at end of table.

TABLE 5.--YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Soil name and map symbol	Corn	Winter wheat	Oats	Grass- legume hay	Alfalfa hay	Pasture
	<u>Bu</u>	<u>Bu</u>	<u>Bu</u>	<u>Ton</u>	<u>Ton</u>	<u>AUM*</u>
LoE----- Lowell-Westmoreland	---	---	---	---	---	4.0
LoF, LpF----- Lowell-Westmoreland	---	---	---	---	---	---
MnB----- Morristown	---	30	50	3.0	---	4.5
MnD----- Morristown	---	25	45	2.5	---	4.0
MnE----- Morristown	---	---	---	---	---	2.0
MoB, MoD----- Morristown	---	---	---	---	---	3.0
MoE, MoF----- Morristown	---	---	---	---	---	---
Ne----- Newark	100	---	---	4.5	---	7.0
Nm----- Newark	---	---	---	---	---	---
Nn----- Newark Variant	90	---	---	4.0	---	6.0
No----- Nolin Variant	135	45	65	4.5	4.5	7.0
Nu----- Nolin Variant-Urban land	---	---	---	---	---	---
OtB----- Otwell	105	47	65	3.6	---	5.8
OtC----- Otwell	75	38	60	3.2	---	5.0
RcC----- Richland	120	40	70	3.5	---	5.8
RcD----- Richland	110	35	60	3.0	---	4.5
RcE----- Richland	---	---	---	---	---	4.0
RhB----- Richland	125	45	75	4.0	---	6.0
Uc----- Udorthents-Pits	---	---	---	---	---	---
Ud----- Udorthents-Urban land	---	---	---	---	---	---
WhB----- Wellston	105	40	70	4.0	4.5	6.0
WhC----- Wellston	100	35	65	4.0	4.5	6.0
WkB----- Westmore	110	40	70	4.5	5.0	7.0

See footnote at end of table.

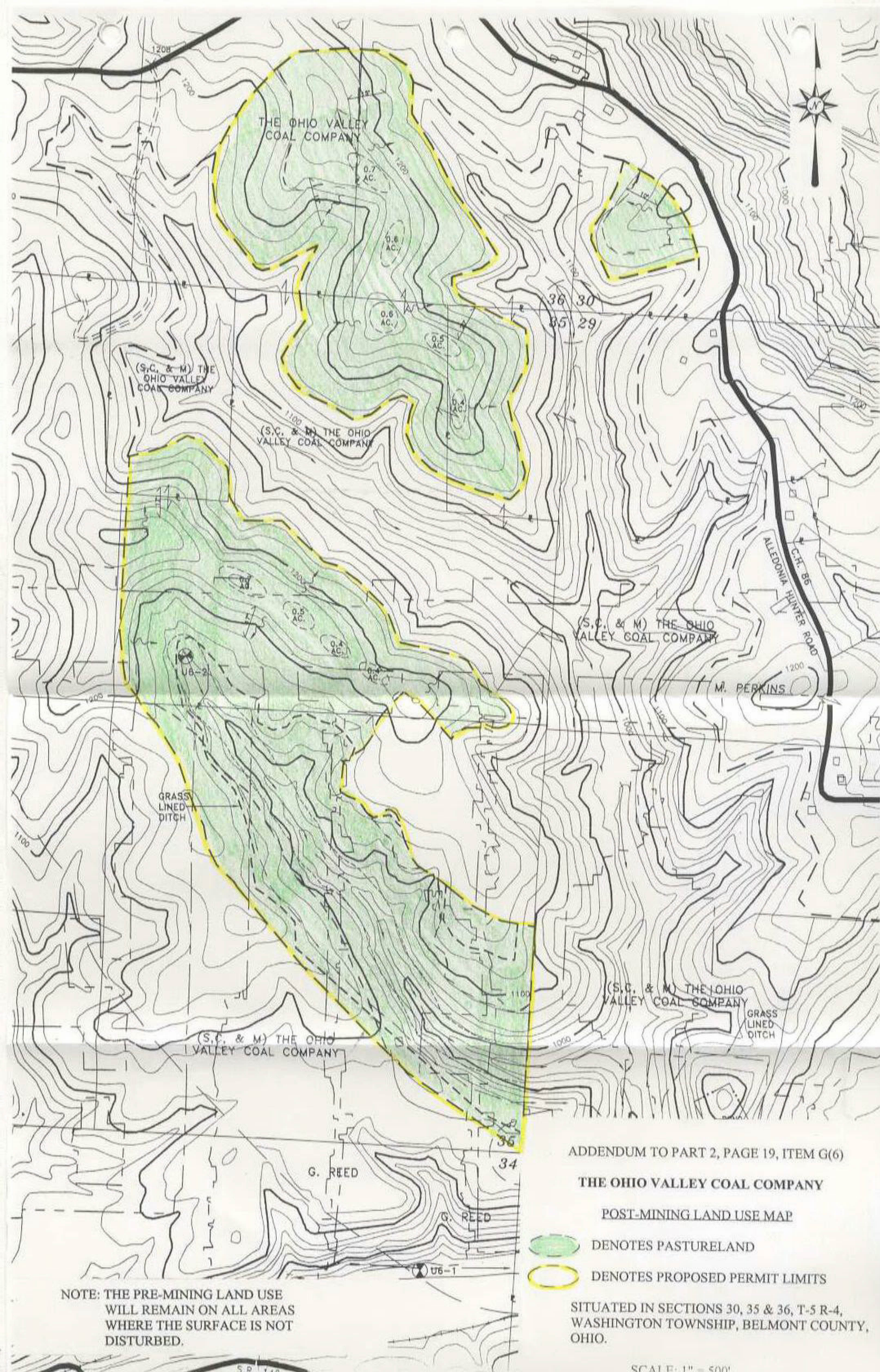
TABLE 5.--YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Soil name and map symbol	Corn	Winter wheat	Oats	Grass- legume hay	Alfalfa hay	Pasture
	<u>Bu</u>	<u>Bu</u>	<u>Bu</u>	<u>Ton</u>	<u>Ton</u>	<u>AUM*</u>
WkC----- Westmore	105	35	70	4.3	5.8	6.6
WkD----- Westmore	100	32	65	4.0	4.5	6.0
WmB----- Westmoreland	110	35	70	3.5	4.5	5.8
WmC----- Westmoreland	100	35	65	3.0	4.0	4.5
WmD----- Westmoreland	70	30	60	3.0	4.0	4.5
WmE----- Westmoreland	---	---	---	---	---	4.0
WmF----- Westmoreland	---	---	---	---	---	---
WoC----- Westmoreland-Upshur	96	30	65	3.0	4.0	4.5
WoD----- Westmoreland-Upshur	85	30	60	2.8	3.5	4.2
ZnB----- Zanesville	95	35	60	3.5	---	5.8
ZnC----- Zanesville	85	35	55	3.5	---	5.8

* Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

ADDENDUM TO PART 2, PAGE 19, ITEM G(6)
THE OHIO VALLEY COAL COMPANY

THE USE OF THE LAND FOLLOWING RECLAMATION WILL BE PASTURELAND.
THE POSTMINING LAND USE FOR THIS AREA WILL BE AESTHETICALLY APPROPRIATE AND
CORRESPONDS WITH ADJACENT LAND USES. GRASSES AND LEGUMES WILL BE USED AS A
COVER CROP. FOLLOWING RECLAMATION, THE CAPABILITY AND PRODUCTIVITY OF THE
LAND WILL BE GREATER THAN THAT AT THE PRESENT TIME. THE RECLAIMED LAND
COULD SUSTAIN OTHER AGRICULTURAL OR RECREATIONAL USES.





NOTE: THE PRE-MINING LAND USE
WILL REMAIN ON ALL AREAS
WHERE THE SURFACE IS NOT
DISTURBED.

ADDENDUM TO PART 2, PAGE 19, ITEM G(6)

THE OHIO VALLEY COAL COMPANY

POST-MINING LAND USE MAP

-  DENOTES PASTURELAND
-  DENOTES PROPOSED PERMIT LIMITS

SITUATED IN SECTIONS 30, 35 & 36, T-5 R-4,
WASHINGTON TOWNSHIP, BELMONT COUNTY,
OHIO.

SCALE: 1" = 500'

- G. (8) Submit as an addendum a copy of the comments from the legal or equitable owner of record of the surface of the proposed permit area concerning the proposed land use.

SEE ADDENDUM TO PART 2, PAGE 20, ITEM G(8)

- (9) Describe the consideration which has been given to making all of the proposed coal mining activities consistent with surface owner plans and applicable state and local land use plans and programs.

NO STATE OR LOCAL LAND USE PLANS EXIST FOR THIS AREA. ALL OF THE PROPOSED COAL MINING ACTIVITIES EXPLAINED IN THIS APPLICATION ARE CONSISTENT WITH THE SURFACE OWNERS PLANS.

- (10) Describe how the proposed land use is to be achieved and the necessary support activities that may be needed to achieve the proposed land use.

THE PROPOSED LAND USE WILL BE ACHIEVED BY FOLLOWING THE PROPOSED RECLAMATION PLAN DESCRIBED IN PART 3 OF THIS APPLICATION.

- (11) Is the postmining land use to be different from the premining land use? X Yes, No. If "yes," submit as an addendum to the permit application, the plans and findings required by paragraph (D) of rule 1501:13-9-17 of the Administrative Code.

SEE ADDENDA TO PART 2, PAGE 20, ITEM G. (11)

- (12) Has the proposed permit area been previously mined? X Yes, No. If "yes," provide the following information, if available.

- (a) Type of mining method UNDERGROUND MINING
- (b) Coal seam mined PITTSBURGH #8
- (c) Non coal mineral mined N/A
- (d) Extent of mining (acres) 73.7
- (e) Approximate dates 1970'S
- (f) Land use preceding mining UNKNOWN

H. PRIME FARMLAND INVESTIGATION-Permit Area

- (1) Does the proposed permit area include any land that is prime farmland, taking into consideration the negative determinations listed in paragraph (L)(2) of rule 1501:13-4-13 of the Administrative Code?
 Yes, X No.
- (2) If the response to item H.(1) is "yes," submit Attachment 15.
- (3) If the response to item H.(1) is "no," submit Attachment 16.

1/90

ADDENDUM TO PART 2, PAGE 20, ITEM G(8),
THE OHIO VALLEY COAL COMPANY

TO: THE OHIO VALLEY COAL COMPANY

FROM: THE OHIO VALLEY COAL COMPANY

Location of Proposed Permit Area:

County BELMONT, Township WASHINGTON

Lot N/A, Section 30, 35, 36, T- 5, R- 4

Pursuant to Ohio Department of Natural Resources,
Division of Reclamation, Ohio Coal Mining and Reclamation Rule
1501:13-4-05 (G) (2) of the Administrative Code, surface owner
comments concerning the proposed postmining land use(s) for the
proposed permit are required.


The proposed postmining land use(s) for areas disturbed on
your property is (are):

PASTURELAND

X I concur with the proposed postmining land use(s).

 I don't concur with the proposed postmining land use(s).


Comments:

 5/7/98
Signature of Surface Owner Date

Signature of Surface Owner Date

Waiver Statement (OPTIONAL FOR SURFACE OWNER)

I, the above name surface owner, waive my right to comment on any
revision to the permit application during the application review
process that results in a change in the postmining land use(s) from
that shown above. (Note, I do not waive my right to comment on any
proposed postmining land use change after permit issuance.)

 5/7/98
Signature of Surface Owner Date

Signature of Surface Owner Date

Addendum To Part 2, Item G(11),
THE OHIO VALLEY COAL COMPANY

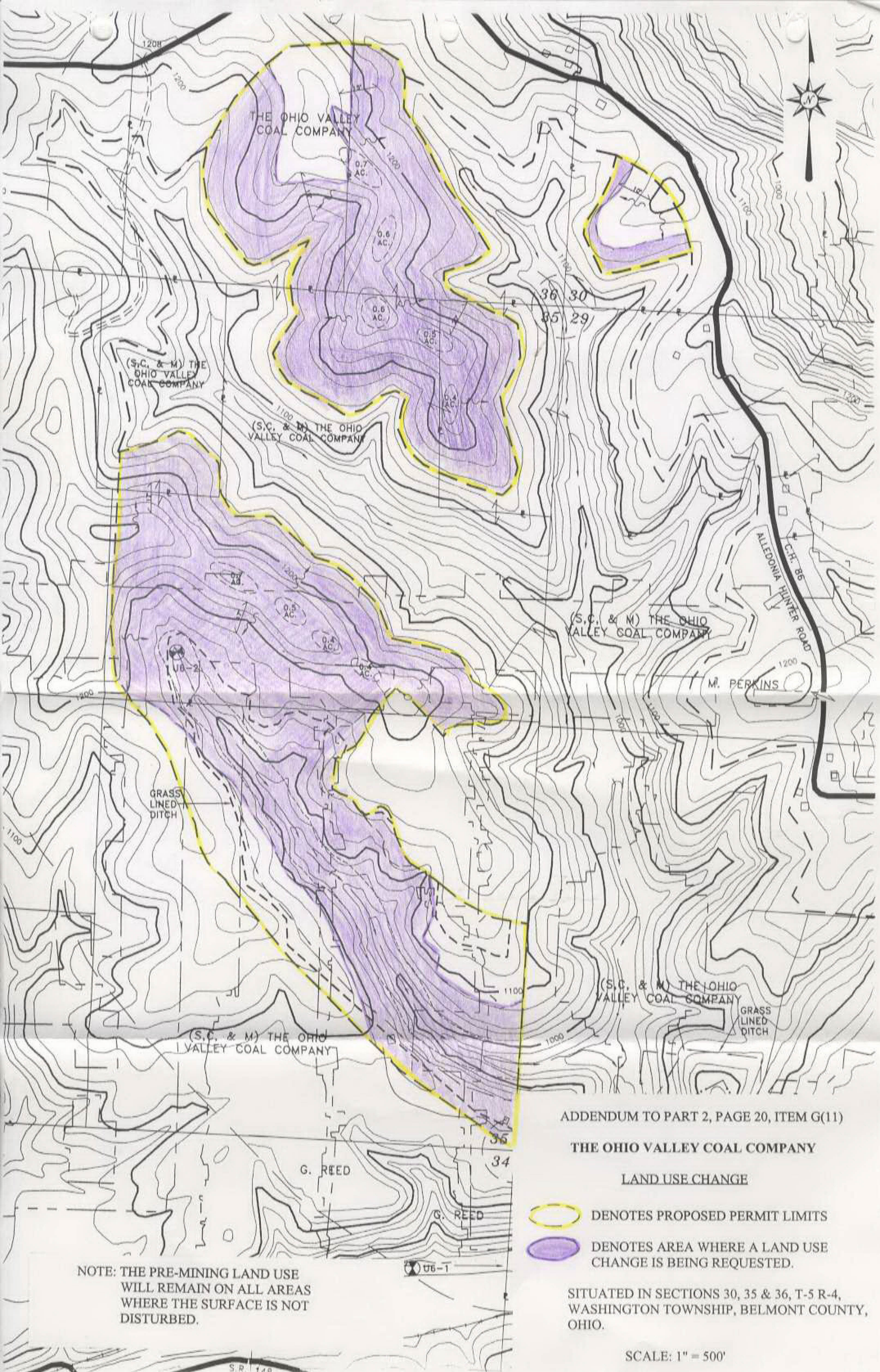
Pre-Mining Land Use: Undeveloped Land, Pastureland

Post Mining Land Use: Pastureland

RULE 1501:13-9-17(D) (1-6)

1. This proposed land use is compatible with the adjacent land uses which primarily consist of pastureland, cropland, and undeveloped land. There are no existing local, state or federal land use policies or plans for the area. A notification of the land use change has been mailed to U.S. Fish & Wildlife and to the Division of Wildlife. No zoning or other changes will be required for this land use change.
2. Based on soil types in the area, the plan is feasible. For a schedule showing how the proposed use will be developed and achieved within a reasonable time see the planting schedule in Part 3 of this permit application.
3. There are no public facilities required for this proposed land use.
4. This proposed land use will neither present actual or probable hazard to public health or safety, nor will it pose any actual or probable threat of water flow diminution or pollution.
5. This proposed land use will not change the reclamation schedule for this permit application.
6. This proposed land use should not have any adverse effects on fish and wildlife. An opportunity to comment has been provided to the appropriate State and Federal Fish and Wildlife Management Agencies. The notification of land use change was mailed to the U.S. Fish and Wildlife and The Division of Wildlife.

NOTE: The pre-mining land use will remain on all areas in which the surface has not been disturbed.





NOTE: THE PRE-MINING LAND USE
WILL REMAIN ON ALL AREAS
WHERE THE SURFACE IS NOT
DISTURBED.

ADDENDUM TO PART 2, PAGE 20, ITEM G(11)

THE OHIO VALLEY COAL COMPANY

LAND USE CHANGE

-  DENOTES PROPOSED PERMIT LIMITS
-  DENOTES AREA WHERE A LAND USE
CHANGE IS BEING REQUESTED.

SITUATED IN SECTIONS 30, 35 & 36, T-5 R-4,
WASHINGTON TOWNSHIP, BELMONT COUNTY,
OHIO.

SCALE: 1" = 500'

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATIONATTACHMENT 16
(NEGATIVE DETERMINATION OF PRIME FARMLAND)APPLICANT THE OHIO VALLEY COAL COMPANY

This attachment is to be completed and submitted with the permit application if the applicant is demonstrating that the permit area or a portion of the permit area is not prime farmland. Check (X) the appropriate item numbers and attach the documents used to make the demonstration.

- X 1. Lands within the proposed permit area have not been historically used for cropland.

SEE ATTACHED ADDENDA

2. The slope of the land within the proposed area is greater than eight percent.

3. On the basis of a second order soil survey meeting the standards of the National Cooperative Soil Survey, there are no soil map units within the proposed permit area that have been designated prime farmland by the U.S. Soil Conservation Service.

4. On the basis of a first order soil survey commissioned by the applicant and meeting the standard of the National Cooperative Soil Survey, there were found to be no prime farmland map units as designated by the S.C.S. within the proposed permit area (See Attachment 15, item 2 for 1st order survey criteria).

Certification of Prime/Nonprime Farmland

Name of Mine Operator The Ohio Valley Coal Co.
Location of Permit Application Area Sections 30, 35, & 36 T-5, R-4 Washington
Twp
Size of Permit Area (Acres) 200

Check Appropriate Block:

1. ☐ I have determined that this permit application DOES NOT contain prime farmland in accordance with the edition of the current county Prime Farmland Map Unit List found in the county Field Office Technical Guide.
2. ☒ I have found that this permit application CONTAINS prime farmland in accordance with the edition of the Prime Farmland Map Units for Ohio and/or the current county Prime Farmland Map Unit List, whichever is more current.

A soil map has been attached and prime units are as follows:

Soil Map Symbol

Map Unit Name

CuB

Culleoka silt loam 3 to 8% slopes

Wm B

Westmoreland silt loam 3 to 8% slopes

Signature

James W Forshey 2/18/98

Jim Forshey, Natural Resources Conservation Service
1119 East Main St., Barnesville, OH 43713, (614) 425-1100

PRIME FARMLAND DESCRIPTION
(Original undisturbed soil profile)

CuB -- Culleoka silt loam, 3 to 8 percent slopes.

This soil has a brown, friable silt loam surface layer, (A Horizon) about 8 inches thick. The subsoil, (B Horizon) is about 17 inches thick. The upper part is brown, friable silt loam. The lower part is brown, friable channery loam. The substratum (C Horizon) is yellowish brown, friable very channery loam. Depth to bedrock ranges from 20 to 40 inches.

PRIME FARMLAND DESCRIPTION
{Original undisturbed soil profile}

WmB-- Westmoreland silt loam, 3 to 8 percent slopes.

This soil has a brown, friable silt loam surface layer {A Horizon} about 8 inches thick. The subsoil {B Horizon} is about 27 inches thick. The upper 20 inches is brown and dark yellowish brown, friable silt loam and firm clay loam. The lower 7 inches is yellowish brown, firm channery clay loam.

ADDENDUM TO ATTACHMENT 16

THE FOLLOWING AFFIDAVITS SIGNED BY ROGER D. BUNTING (LOCAL LAND OWNER) ARE BEING SUBMITTED BECAUSE THE OWNERS OF THE LAND DURING THE 10 YEAR PERIOD PRIOR TO THE DATE OF THE COAL PURCHASES COULD NOT BE LOCATED. IT WAS REPORTED THAT THEY HAVE LEFT THE IMMEDIATE AREA AND THEIR WHEREABOUTS ARE UNKNOWN. MR. BUNTING HAS RESIDED APPROXIMATELY 1 ½ MILES WEST OF THE SITE FOR THE PAST 46+ YEARS.

ADDENDUM TO ATTACHMENT 16, THE OHIO VALLEY COAL COMPANY

AFFIDAVIT

State of Ohio, Belmont County, ss ROGER DALE BUNTING
being first duly sworn, says that the following information explained
below is correct.

I have resided near the land from 1952 to present.

Date Land sold to NACCO MINING CO. : 9-26-83

The areas shown in green on the attached map were not used as
cropland for more than five years out of the ten year period from
9-26-73 to 9-26-83.

Description of the land:

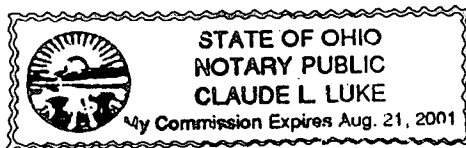
Situated in Sections 35 & 36, Township 5 Range 4, Washington
Township, Belmont County, Ohio. The areas shown in green on the
map attached hereto and made a part hereof were used as
PASTURE for the entire ten year period stated above.

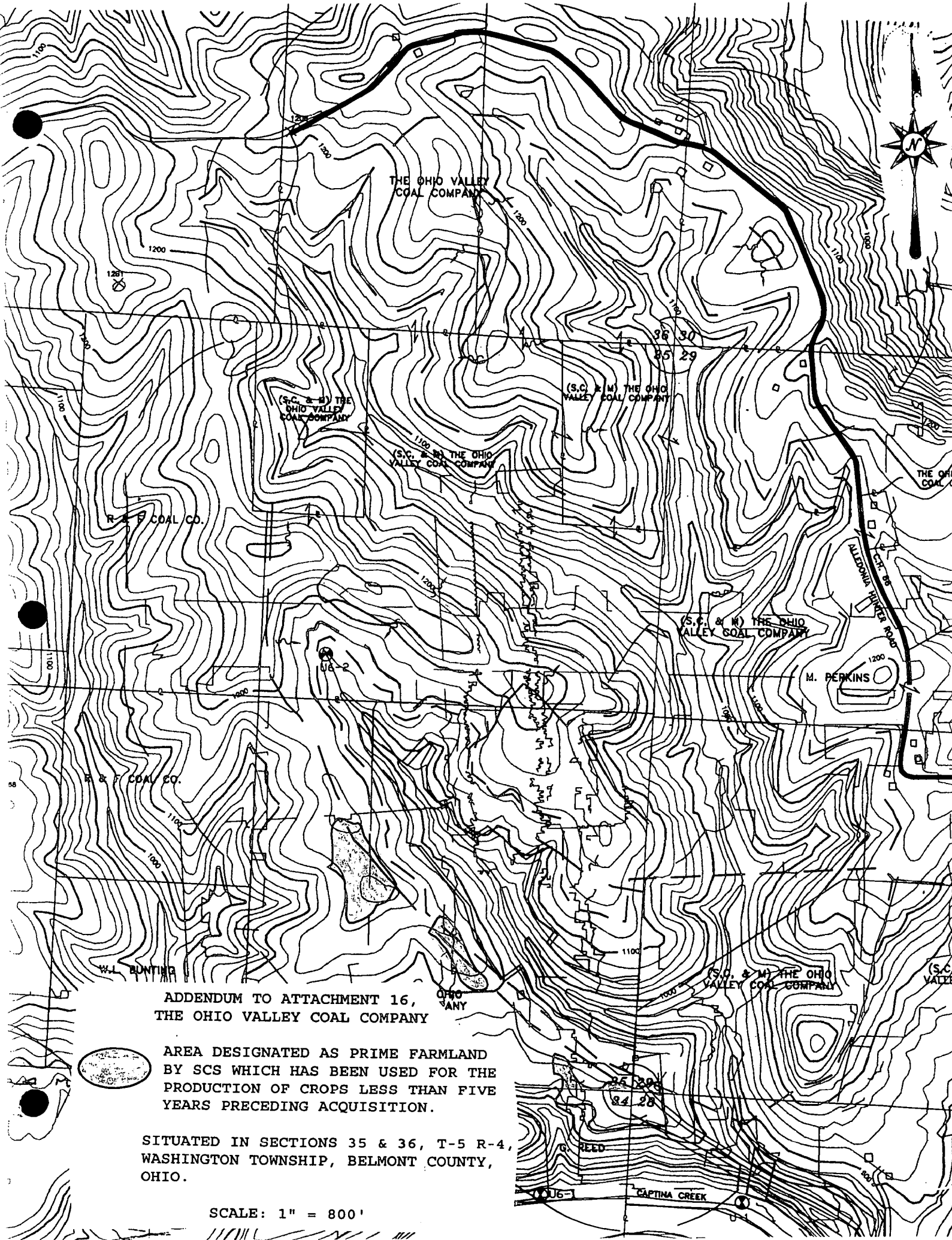
Roger Dale Bunting
Signature (Local Property Owner)

FEB. 27, 1998
Date

Sworn to before me and subscribed in my presence this 27th day of
FEB. 1998.

Claude L. Luke
Notary Public





ADDENDUM TO ATTACHMENT 16, THE OHIO VALLEY COAL COMPANY

AFFIDAVIT

State of Ohio, Belmont County, ss ROGER DALE BUNTING
being first duly sworn, says that the following information explained
below is correct.

I have resided near the land from 1952 to present.

Date Land sold to NACCO MINING CO. : 5-24-71

The areas shown in green on the attached map were not used as
cropland for more than five years out of the ten year period from
5-24-61 to 5-24-71.

Description of the land:

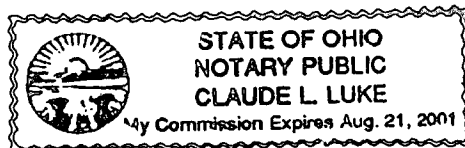
Situated in Sections 35 & 36, Township 5 Range 4, Washington
Township, Belmont County, Ohio. The areas shown in green on the
map attached hereto and made a part hereof were used as
PASTURE for the entire ten year period stated above.

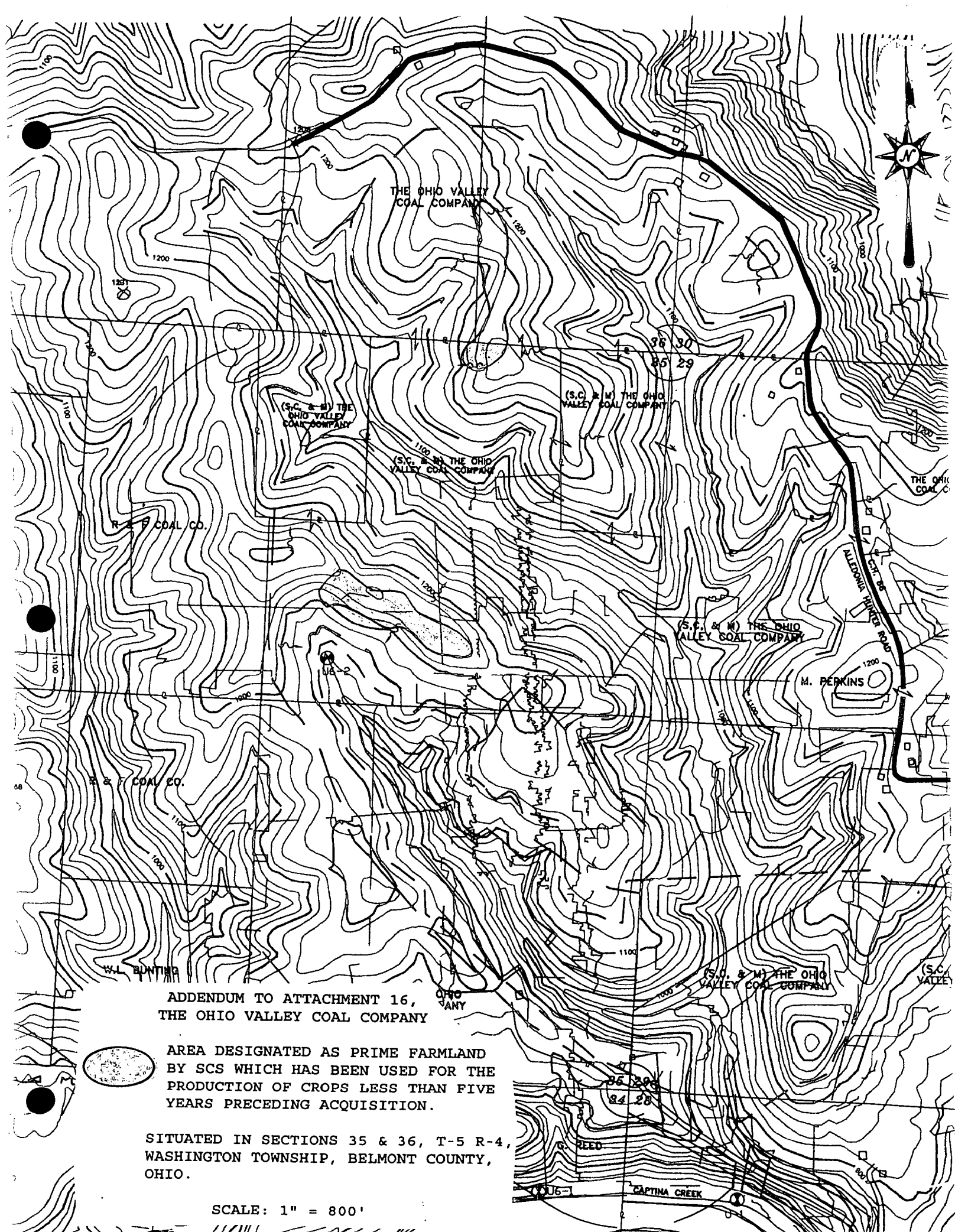
Roger Dale Bunting
Signature (Local Property Owner)

FEB. 27, 1998
Date

Sworn to before me and subscribed in my presence this 27th day of
FEB. 1998.

Claude L. Luke
Notary Public





ADDENDUM TO ATTACHMENT 16,
THE OHIO VALLEY COAL COMPANY

AREA DESIGNATED AS PRIME FARMLAND
BY SCS WHICH HAS BEEN USED FOR THE
PRODUCTION OF CROPS LESS THAN FIVE
YEARS PRECEDING ACQUISITION.

SITUATED IN SECTIONS 35 & 36, T-5 R-4,
WASHINGTON TOWNSHIP, BELMONT COUNTY,
OHIO.

SCALE: 1" = 800'

ADDENDUM TO ATTACHMENT 16, THE OHIO VALLEY COAL COMPANY

AFFIDAVIT

State of Ohio, Belmont County, ss ROGER DALE BUNTING
being first duly sworn, says that the following information explained
below is correct.

I have resided near the land from 1952 to present.

Date Land sold to NACCO MINING CO. : 4-5-88

The areas shown in green on the attached map were not used as
cropland for more than five years out of the ten year period from
4-5-78 to 4-5-88.

Description of the land:

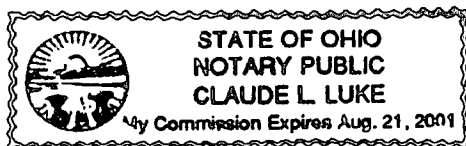
Situated in Sections 35 & 36, Township 5 Range 4, Washington
Township, Belmont County, Ohio. The areas shown in green on the
map attached hereto and made a part hereof were used as
PASTURE for the entire ten year period stated above.

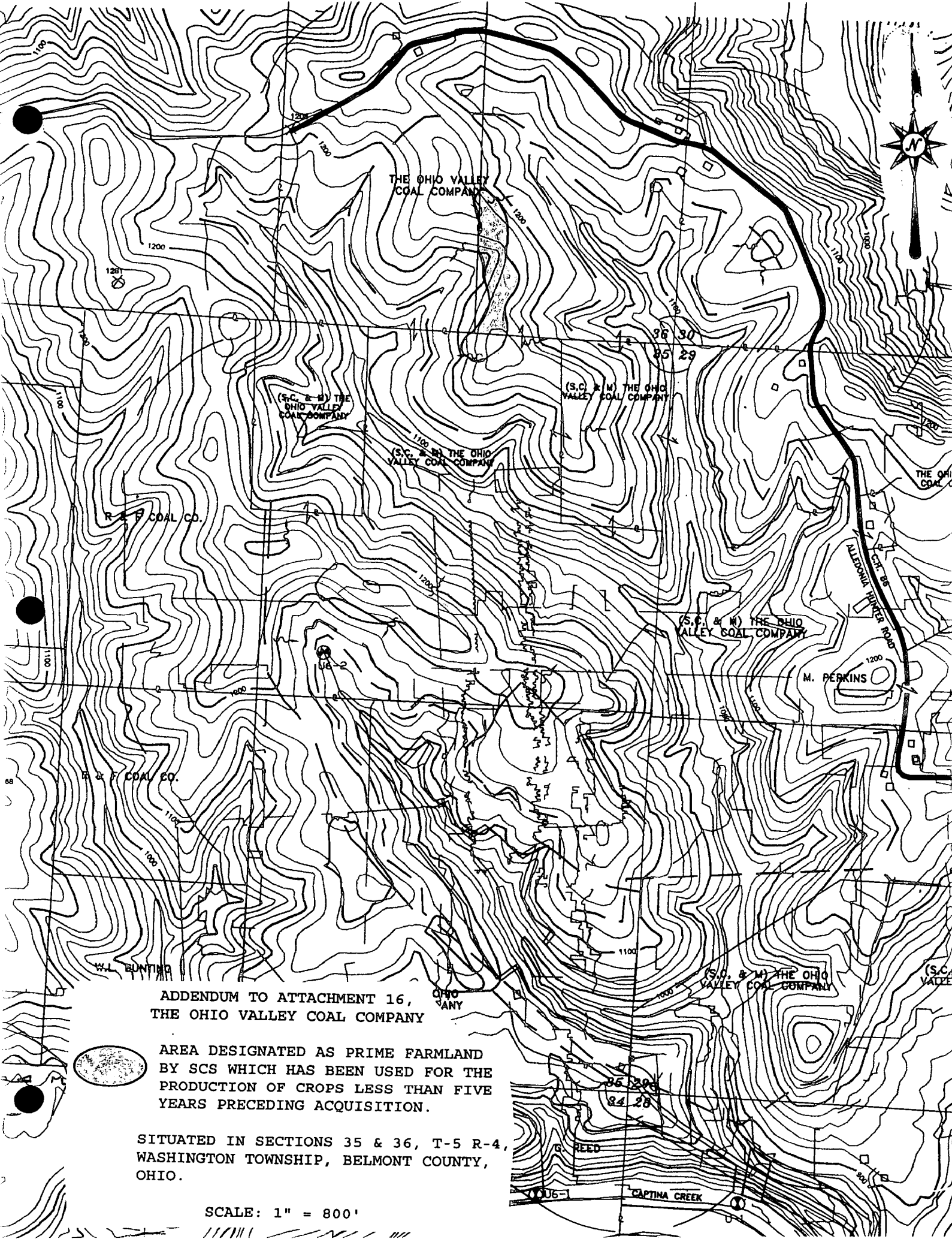
Roger Dale Bunting
Signature (Local Property Owner)

FEB. 27, 1998
Date

Sworn to before me and subscribed in my presence this 27th day of
FEB. 1998.

Claude L. Luke
Notary Public





ADDENDUM TO ATTACHMENT 16,
THE OHIO VALLEY COAL COMPANY

AREA DESIGNATED AS PRIME FARMLAND
BY SCS WHICH HAS BEEN USED FOR THE
PRODUCTION OF CROPS LESS THAN FIVE
YEARS PRECEDING ACQUISITION.

SITUATED IN SECTIONS 35 & 36, T-5 R-4,
WASHINGTON TOWNSHIP, BELMONT COUNTY,
OHIO.

SCALE: 1" = 800'

1/90

ADDENDUM TO PART 2, PAGE 20, ITEM G(8),
THE OHIO VALLEY COAL COMPANY

TO: THE OHIO VALLEY COAL COMPANY

FROM: THE OHIO VALLEY COAL COMPANY

Location of Proposed Permit Area:

County BELMONT, Township WASHINGTON

Lot N/A, Section 30, 35, 36, T- 5, R- 4

Pursuant to Ohio Department of Natural Resources, Division of Reclamation, Ohio Coal Mining and Reclamation Rule 1501:13-4-05 (G) (2) of the Administrative Code, surface owner comments concerning the proposed postmining land use(s) for the proposed permit are required.

The proposed postmining land use(s) for areas disturbed on your property is (are):

PASTURELAND

 X I concur with the proposed postmining land use(s) .

_____ I don't concur with the proposed postmining land use(s).

Comments:

Signature of Surface Owner _____ Date 5/7/98

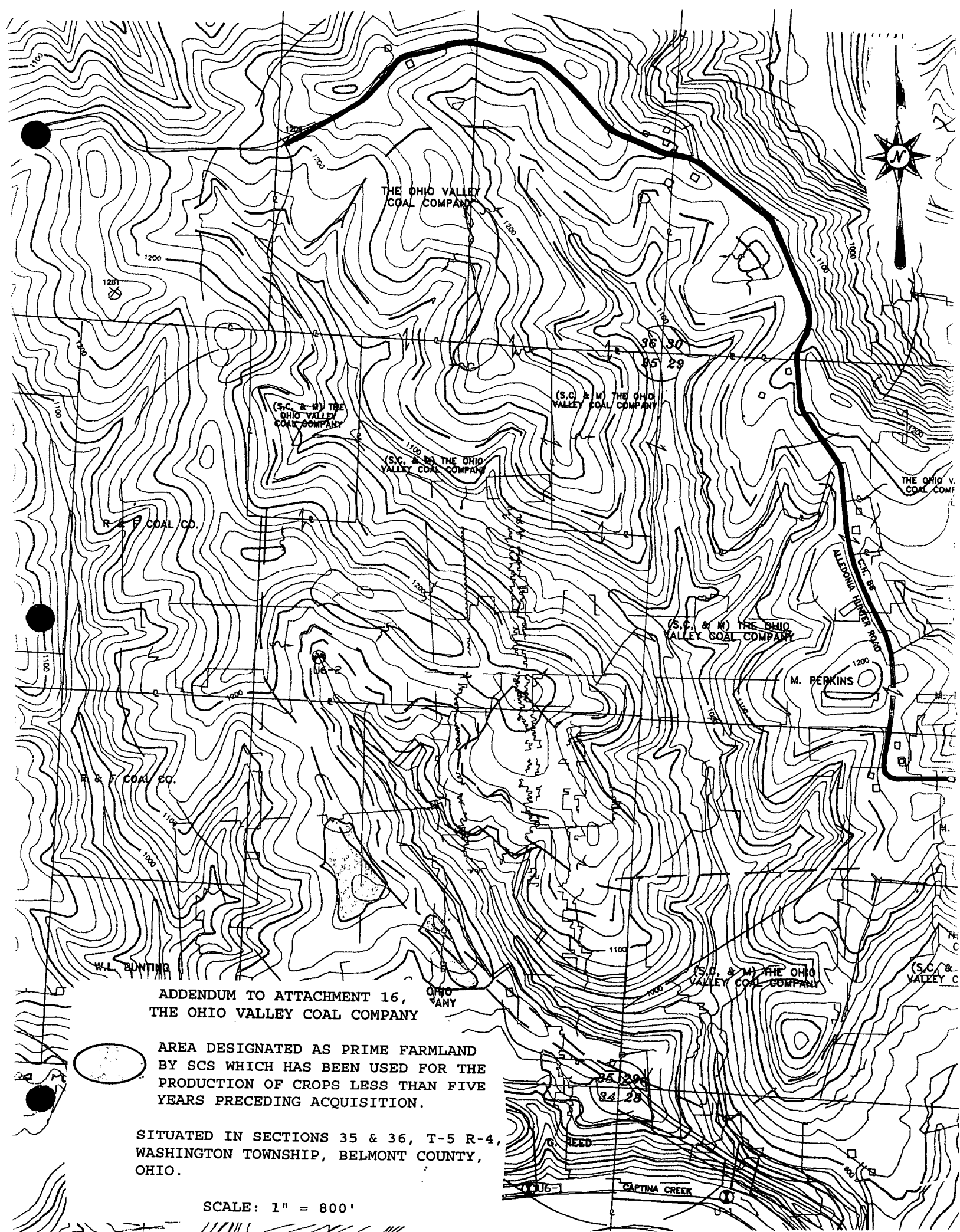
Signature of Surface Owner	Date
----------------------------	------

Waiver Statement (OPTIONAL FOR SURFACE OWNER)

I, the above name surface owner, waive my right to comment on any revision to the permit application during the application review process that results in a change in the postmining land use(s) from that shown above. (Note, I do not waive my right to comment on any proposed postmining land use change after permit issuance.)

Signature of Surface Owner 5/7/98
Date

Signature of Surface Owner	Date
----------------------------	------



PART 3 RECLAMATION AND OPERATIONS PLANS

A. GENERAL REQUIREMENTS-Permit Area (Item A. (1) and A. (2)-
Permit and Underground Workings)

- (1) Submit an addendum describing the type and method of coal mining procedures for this application. Explain how these procedures will maximize the use and conservation of the coal resources.

THE PROPOSED ADJACENT AREA WILL BE UTILIZED FOR COAL REFUSE DISPOSAL. SINCE THE MAJORITY OF THE COAL MUST BE CLEANED PRIOR TO BURNING BY AN ELECTRIC POWER PLANT FACILITY, THIS PROCEDURE WILL MAXIMIZE THE USE OF COAL RESOURCES BY PROVIDING DISPOSAL AREA FOR REFUSE FROM THE PREPARATION PLANT. THIS OPERATION DOES NOT APPLY TO CONSERVATION OF THE COAL RESOURCES. ALSO, SEE ADDENDUM TO PART 3, ITEM A(1).

- N/A (2) Indicate the anticipated annual and total production of coal from this proposed operation.
Annual _____ Total _____

- N/A (3) Will this operation be combined with surface coal mining activities to the extent that contemporaneous reclamation of areas disturbed by surface mining will be delayed or such that the underground workings will be within 500 feet of the surface mining activities?
_____ Yes, _____ No. If "yes," submit Attachment 30.

- N/A (4) Are experimental mining practices to be employed in the proposed mining operations? _____ Yes, _____ No. If "yes," submit as an addendum to the permit application, the description, maps, and plans required by paragraph (B) of rule 1501:13-4-12 of the Administrative Code.

- N/A (5) Are mountaintop removal mining practices to be employed in the proposed mining operations? _____ Yes, _____ No. If "yes," submit as an addendum to the permit application the information required by paragraph (C) of rule 1501:13-4-12 of the Administrative Code.

- N/A (6) Are the natural pre-mining slopes within the permit area in excess of twenty (20) degrees?
_____ Yes, _____ No. If "yes," submit an addendum demonstrating compliance with the steep slope mining provisions of paragraph (D) of rule 1501:13-4-12 and 1501:13-13-05 of the Administrative Code.

- N/A (7) Is augering proposed within the permit area?
_____ Yes, _____ No. If "yes," submit Attachment 18.

- N/A (8) Are variances from approximate original contour to be employed for the proposed underground mining surface operations? _____ Yes, _____ No. If "yes," submit an addendum to the permit application demonstrating compliance with paragraph (E) and/or (K) of rule 1501:13-4-12 of the Administrative Code.

ADDENDUM TO PART 3, PAGE 21, ITEM A(1)
THE OHIO VALLEY COAL COMPANY

Project development is as follows:

1. Prior to construction, a sedimentation pond will be constructed downstream of all proposed earthmoving activities. Erosion and sediment will be controlled by placement of haybales or silt fence as appropriate to earthmoving tasks. Diversion ditches will be constructed to direct surface water from the construction area. Fresh water will be diverted away from the site. Ditches within the disturbed area will be directed to the sediment pond, designated as Pond 013. Diversion channels will be seeded or lined with durable riprap as shown in attached plans.
2. The proposed fill site will be cleared and grubbed after the erosion and sedimentation controls have been installed. Vegetation will be chipped or burned. Hardwood trees greater than 14 inches in diameter will be salvaged. An OEPA permit to burn will be obtained by the contractor prior to any burning.
3. Topsoil will be removed from the project area and stockpiled as shown on the Application map. Other soils in the project area, unsuitable for the refuse fill foundation will be removed and either stockpiled or used to construct berms.
4. Groundwater collection drains will be installed in the valley bottom and to point seeps. Details are shown on drawing 9 of attached plans.
5. The projected fill area will be lined with three feet of recompacted clay. Specifications are contained in Appendix VIII of the Engineering Report. Installation details are shown on drawing 11 of the attached plans.
6. A leachate collection system will be constructed on the clay liner. Details are shown on drawings 10 and 11 of attached plans. All leachate will be directed to Pond 013 for phase 1 development, and later to Pond 014 for remaining phases.
7. Coarse coal refuse will be placed on the clay lined surface. Refuse will be placed in horizontal lifts, two feet thick maximum. Each lift will be compacted by a padfoot compactor, sheepsfoot, or from controlling site traffic, loaded rock trucks (Cat 777's payload 85 tons).
8. The site will be capped upon reaching final fill elevations. Details are shown on drawing 11 of attached plans. Reclamation plans are contained in Section 10 of the Engineering Report.
9. Borrow soils used as liner and subgrade will come from the east knob (Pond 014 area), areas adjacent to the emergency spillway, as well as borrow areas (3) to the north, as shown on the Application Map. Reclamation north and south of the spillway will consist of grading and seeding as outlined in Section 10 of the Engineers Report. The east knob borrow area will be excavated (to facilitate Pond 014 construction) to approximately the 1010 elevation from an initial elevation of 1112.7 feet. East knob will provide borrow for clay liner, unclassified subgrade soils, topsoil, and durable rock for lining surface water drainage channels. See Engineers Report Section 2.5.1 and 2.6.

- A.
- (9) Will access to the underground workings be gained through a drift entry? _____ Yes, _____ No. If yes, provide as an addendum sufficient information to determine the location of the entry relative to the highest elevation of the coal reserve. Is the drift entry located so as to eliminate the potential for a gravity discharge? _____ Yes, _____ No. If "no," the applicant must demonstrate that the coal seam is not acid or iron producing. Provide an analysis of the strata immediately above and below the coal, and the coal seam itself, sufficient to demonstrate that the water quality from the entry will meet effluent limitations without treatment.
- (10) For entries to underground workings other than drift entries, provide as an addendum sufficient information to determine the location of the entry relative to the coal reserve. Are the entries located so as to eliminate the potential for a gravity discharge? _____ Yes, _____ No. If "no," provide the following demonstration:
- (a) the gravity discharge will meet effluent limitations without treatment, or
- (b) the water will be treated to meet effluent limitations and provisions will be made for consistent maintenance of the treatment facility throughout the anticipated period of gravity discharge.
- (11) Will the permanent entry seals be designed to withstand the maximum anticipated hydraulic head when the operations are abandoned? _____ Yes, _____ No. If "yes," submit the appropriate information demonstrating that this will be accomplished. If "no," provide a typical plan for the seals to be used to close the mine entries pursuant to applicable state and federal regulations.
- (12) Submit an addendum describing the construction, modification, maintenance, and removal (unless to be retained for postmining land use), including the proposed engineering techniques and major equipment to be used, of the following facilities:

SEE ADDENDUM TO PART 3, PAGE 22, ITEM A(12)

- (a) dams, embankments, and other impoundments. Do any of the plans for water, sediment, or slurry impoundments meet the requirements of 30 CFR 77.216? _____ Yes, X No. If "Yes," submit as an addendum a plan that addresses each of the requirements in 30 CFR 77.216-2.
- (b) overburden and topsoil handling and storage areas and structures.

SEE ADDENDUM TO PART 3, PAGE 24, ITEM D (5)

ADDENDUM TO PART 3, PAGE 22, ITEM A(12)
THE OHIO VALLEY COAL COMPANY

MEASURES TO BE TAKEN TO MINIMIZE DAMAGE, DESTRUCTION OR DISRUPTION TO SERVICES PROPOSED BY THE ELECTRIC UTILITY LINES CURRENTLY LOCATED WITHIN THE PROPOSED DISPOSAL AREA WILL BE AS FOLLOWS:

1. NEW SUPPORT POLES AND ELECTRIC LINE WILL BE INSTALLED ON THE SAME RIDGE AT ELEVATIONS HIGHER THAN THE PROPOSED REFUSE DISPOSAL FACILITY. THE PROPERTY AFFECTED IS OWNED BY THE OHIO VALLEY COAL COMPANY. THE CURRENT POWERLINE IS SHOWN ON THE APPLICATION MAP. THE UTILITY COMPANY WILL DETERMINE THE NEW LINE LOCATION.
2. THE ELECTRIC COMPANY WILL DISCONNECT THE OLD LINE AND ENERGIZE THE NEW LINE IN THE MOST TIMELY MANNER POSSIBLE.
3. UPON COMPLETION OF INSTALLING NEW SERVICE, THE OHIO VALLEY COAL COMPANY WILL REMOVE ALL OLD STRUCTURE PRIOR TO SITE DEVELOPMENT.
4. THIS TASK IS EXPECTED TO TAKE PLACE IN 5 TO 7 YEARS.

- A. (12) (c) coal removal, handling, storage, cleaning, and transportation areas and structures; including, but not limited to, preparation plants, beltlines, tipples, rail sidings, and primary roads. For roads, conveyors and rail systems, submit an addendum describing the information required pursuant to paragraph (L) of rule 1501:13-4-14 and 1501:13-10-01 of the Administrative Code.
- (d) spoil removal, handling, storage, transportation, and disposal areas and structures, including underground development waste or excess spoil disposal sites. If underground development waste or excess spoil is to be generated, submit an addendum describing the information required by paragraphs (O) and (P) of rule 1501:13-4-14 and 1501:13-9-07 of the Administrative Code.
- (e) mine facilities such as portal/shaft development, boreholes, de-gas holes, vents, office or shop buildings and maintenance facilities.
- (f) water and air pollution control facilities.
- (13) Provide an estimate of the cost per acre to reclaim the permit area. \$2500
- (14) Will the proposed operation include any of the following:
- (a) disposal of coal mine waste from a wash plant, tippie or other source? X Yes, No. If "yes," submit Attachment 28 and, if applicable, the information required by paragraph (H) of rule 1501:13-4-14 of the Administrative Code.

SEE P.T.I. APPLICATION, ATTACHMENT 28 AND ADDENDA

- (b) disposal of fly ash or other noncoal wastes?
 Yes, X No. If "yes," submit an addendum which addresses the disposal material and a detailed disposal plan, pursuant to paragraph (E) of rule 1501:13-9-09 of the Administrative Code.
- (c) return of slurry or other mine waste or material into the abandoned underground workings?
 Yes, X No. If "yes," comply with provisions contained in paragraph (N) of rule 1501:13-4-14 and paragraph (Q) of 1501:13-9-04 of the Administrative Code, and submit copies of the required MSHA approvals as an addendum.

B. EXISTING STRUCTURES-Permit Area

- (1) Are any existing structures proposed to be used in connection with or to facilitate the coal mining and reclamation operation? Yes, X No. If "yes," submit as an addendum to the permit application a description of each structure. The description shall include the information required by paragraph (B)(1) of rule 1501:13-4-14 of the Administrative Code.

- B. (2) Are any existing structures proposed to be modified or reconstructed for use in connection with or to facilitate the coal mining and reclamation operation? _____ Yes, _____ No. If "yes," submit as an addendum to the permit application, a compliance plan for each structure. The plan shall include the information required by paragraph (B) (2) of rule 1501:13-4-14 of the Administrative Code.

C. BLASTING-Permit Area

Will blasting occur within 25 feet of the surface during shaft and portal development or other on-site development? _____ Yes, _____ No. If "yes," submit Attachment 29.

D. RECLAMATION PLAN - GENERAL REQUIREMENTS-Permit Area (Item D. (12)-Permit, Shadow, and Adjacent Area)

- (1) Provide a detailed timetable for the completion of backfilling and grading for each mining year.
SEE ADDENDUM TO PART 3, PAGE 24, ITEM D(1-6a)
- (2) Provide a detailed timetable for the completion of resoiling for each mining year.
SEE ADDENDUM TO PART 3, PAGE 24, ITEM D(1-6a)
- (3) Provide a detailed timetable for the completion of planting for each mining year.
SEE ADDENDUM TO PART 3, PAGE 24, ITEM D(1-6a)
- (4) Describe the plan for backfilling, compacting and grading of the disturbed permit area, including the disposal of all mine generated debris.

**SEE ADDENDUM TO PART 3, PAGE 24, ITEM D(1-6a),
ADD. TO PT. 3, D(4) REGRADING CROSS SECTIONS**
- (5) Submit an addendum describing the plan for the removal, storage, redistribution and stabilization of topsoil, subsoil, or approved alternative resoiling material to meet the requirements of rule 1501:13-9-03 of the Administrative Code. If an alternative resoiling material is to be used, submit Attachment 19.

SEE ADDENDUM TO PART 3, PAGE 24, ITEM D(1-6a)
- (6) Provide the following information for the revegetation plan:
 - (a) Schedule for revegetation to include planting of temporary vegetation.

SEE ADDENDUM TO PART 3, PAGE 24, ITEM D(1-6a)

ADDENDUM TO PART 3, PAGE 25, ITEM D(6b-7)
THE OHIO VALLEY COAL COMPANY

D(6)b) Temporary cover will consists of a combination mixture of rye/oats and/or wheat at an application rate of two bushels per acre.

Permanent Vegetation will consists of the following:

8 pounds/acre Orchard Grass
7 pounds/acre Alfalfa
10 pounds/acre Timothy
10 pounds/acre Red Clover

D(6)c) Upon resoiling, the area will be disced, swept, rocks removed, redisced and grain drilled.

D(6)d) Areas will be mulched with hay or straw at the rate of 2 tons per acre with a mulching machine or manually.

D(7) The soil testing plan consists of collecting representative samples by probing the resoiled area to achieve composite samples and thickness. Soil samples will be tested by an approved lab to determine lime and fertilizer recommendations for grass-legume establishment.

ADDENDUM TO PART 3, PAGE 24, ITEM D(1 - 6a)
THE OHIO VALLEY COAL COMPANY

D(1) This is a proposed coal refuse disposal site. Grading will be done contemporaneously with raising the fill structure. This facility is designed to accommodate coarse coal refuse through the year 2008, possibly longer. Coarse coal refuse will be placed in horizontal lifts, two feet thick maximum. Each lift will be compacted. The site will be constructed in stages to elevations and grades shown in the Engineering Report, Page 27, Section 9. Each stage takes an average of two years to complete. The site design capacity is 13.2 million cubic yards. Site life is 9 to 11 years depending on actual material density. The borrow areas will be regraded as soon as practicable after the materials necessary for lining and/or capping the disposal site are removed. It is anticipated that materials from the east knob borrow area will be excavated and this borrow area will be regraded by the end of Phase II, approximately two years after initial excavation. All borrow areas, including the northern borrow areas will be regraded contemporaneously with excavation.

D(2) Resoiling will begin as soon as possible, or within 60 days, for areas filled to final design elevations. The resoiling operation, in ascending order over the refuse surface, consists of two feet of recompacted clay, eighteen inches in inert earthen fill, and six inches of soil suitable for supporting vegetative growth. These operations are consistent with good agricultural practice for soil handling and favorable planting conditions. Resoiling will be completed prior to the next appropriate planting season, or within 180 days, for areas filled to final design elevation. Also see Engineers Report, Section 10. Resoiling of the borrow areas will commence and be completed on graded areas during the first appropriate planting/growing season following completion of grading, unless precluded by climatic conditions.

D(3) Planting will be completed on each area filled to final design capacity, and on borrow areas, following resoiling, during the first appropriate period for favorable planting conditions after final preparation. Planting on each area will be done in a timely manner after resoiling is completed, considering weather conditions. See Engineers Report, Section 10.

NOTE: An exact timetable for a project of this type is extremely hard to detail, and therefore, not actually appropriate.

D(4) Coarse coal refuse will be placed in horizontal lifts, two feet thick maximum. Each lift will be compacted using a padfoot or sheepsfoot compactor, or from controlling traffic of on-site loaded trucks and other equipment. The site will be constructed to elevations and grades as shown on the attached engineering plan. The maximum grade of side slopes will be 33% (3H:IV). The top or plateau section will be crowned with a 2% slope to promote surface drainage. See regrading cross sections.

Soil stabilization will be accomplished thorough grade control, proper drainage and prompt revegetation.

The site will be used only for the disposal of coarse coal refuse. This includes earthen materials or waste rock from mining operations such as claystone, shale, sandstone, limestone, and carbonaceous strata. Materials subject to decay or rust such as organics and metals shall not be placed in the fill.

D(5) Topsoil in the proposed fill site will be removed, stockpiled, seeded and mulched. Stockpile areas will be located within the permit area. These areas will not be affected by excessive water, wind erosion, unnecessary compaction, or contamination. Wind and water erosion will be mitigated by use of a quick growing annual or perennial vegetation. Seeding will be done in a timely manner

when weather conditions are favorable.

All topsoil will be redistributed. This will be achieved by hauling or pushing it from the storage areas. A uniform thickness of six inches will be distributed. Excessive compaction will be prevented by not redistributing excessively wet soils, and limiting equipment racking.

D(6)a) Temporary vegetation will be planted immediately after resoiling and permanent vegetation will be planted no later than the next appropriate planting season following resoiling.

ELEV.
1300

1200 A

1100

0+00

2+00

4+00

6+00

8+00

PERMIT
LIMIT

A'

27%
8% -8%
-33%
-27%

REGRADING CROSS SECTION A - A'

ELEV.
1300

1200

1100

0+00

2+00

4+00

6+00

8+00

PERMIT
LIMIT

B

20%
30%
7%
-6%
-30%
-24%

B'

PERMIT
LIMIT

1200

1100

9+30

REGRADING CROSS SECTION B - B'

ELEV.
1200

1100

0+00

2+00

4+00

5+90

PERMIT
LIMIT

C

7%
12%
7%

REGRADING CROSS SECTION C - C'

REGRADING CROSS SECTIONS

ADDENDUM TO PAGE 24, ITEM D(4)

APPLICANT: THE OHIO VALLEY COAL COMPANY

SECTION: 30, 35 & 36 TOWNSHIP: 5 RANGE: 4

TOWNSHIP: WASHINGTON COUNTY: BELMONT

SCALE: AS SHOWN DATE: 12/4/98

DRAWN BY: SSU COMM. #469-21

SHEET: 1 OF 1 REV. DATE:

Jack A. Hamilton & Associates, Inc.
Consulting Engineers & Surveyors
Box 471 342 High Street
Flushing, Ohio 43977



HORIZ. SCALE: 1" = 100'
VERT. SCALE: 1" = 100'

EXISTING SLOPE

PROPOSED SLOPE

- D. (6) (b) List the species and amounts per acre of seeds and seedlings to be used.

(c) Describe the methods to be used in planting and seeding.

(d) Describe the mulching techniques.

SEE ADDENDUM TO PART 2, PAGE 24, ITEM D(6b-7)

- (7) Describe the soil testing plan for evaluation of the results of topsoil handling and reclamation procedures related to revegetation.

SEE ADDENDUM TO PART 2, PAGE 24, ITEM D(6b-7)

- (8) Describe the measures to be employed to handle and place acid or toxic-forming materials in accordance with paragraph (J) of rule 1501:13-9-04, and paragraph (J) of rule 1501:13-9-14 of the Administrative Code.

HANDLING AND PLACEMENT OF ACID OR TOXIC FORMING MATERIALS WILL TAKE PLACE WITHIN THE PROPOSED REFUSE DISPOSAL SITE.

- (9) Describe the measures, including appropriate cross-sections and maps, to be used to plug, case or manage mine openings or bore holes other than those entries utilized to gain access to the underground workings, pursuant to rule 1501:13-9-02 of the Administrative Code.

- (10) Is the reclamation plan consistent with local physical, environmental, and climatological conditions?

 X Yes, No.

- (11) Identify any other applicable air and water quality laws and regulations and health and safety standards and describe the steps to be taken to comply with each.

APPROPRIATE STEPS HAVE BEEN TAKEN TO COMPLY WITH MINE SAFETY AND HEALTH ACT, CHAPTER 1521 O.R.C., AND STATE AND FEDERAL EPA REGULATIONS.

- (12) Submit an addendum describing the plan for minimizing to the extent possible and using the best technology currently available disturbances and adverse impacts of the operation on fish and wildlife and related environmental values and achieving enhancement of such resources where practical for the permit, shadow, and adjacent areas.

SEE ADDENDUM TO PART 3, ITEM D(12)

ADDENDUM TO PART 2, PAGE 25, ITEM D (12)
THE OHIO VALLEY COAL COMPANY

D (12). The adverse impacts from the proposed refuse disposal operation on wildlife and related environmental values should be minimized by disturbing the smallest area practical in advance of fill placement, and by minimizing the time between removal of vegetative cover and replanting of the reclaimed area. Fish do not exist within the proposed fill area because of intermittent flows.

The construction of sediment ponds and the creation of temporary brush piles throughout the refuse fill process will provide temporary habitat for wildlife and aquatic life. The portion of Perkins Run downstream of the project will continue to provide a natural habitat for wildlife while the fill site is operational. Tree lines along the undisturbed sections of the permit area will provide travel lanes and cover for wildlife. Upon final reclamation, the seeded areas will provide a suitable mixture of open areas for food and the natural undisturbed woods and brushlands for cover to promote the successful return of wildlife to the area.

E. RECLAMATION PLAN - PROTECTION OF HYDROLOGIC BALANCE-Permit and Adjacent Area

Submit an addendum describing the measures to be taken during and after the proposed mining operations to:

- (1) Minimize disturbance to the hydrologic balance, including quality and quantity, within the permit and adjacent areas and to prevent material damage outside the permit area;
- (2) protect the rights of present users of surface and ground water;
- (3) avoid acid or toxic drainage.

SEE ADDENDUM TO PART 3, PAGE 26, ITEM E(1)(2)(3)

F. GROUND WATER AND SURFACE WATER MONITORING PLAN-Permit and Shadow Area

Based upon the probable hydrologic consequences determination and analysis of all baseline hydrologic, geologic, and other information submitted in this application, address the following items in accordance with paragraph (F) of rule 1501:13-4-14 and paragraph (N) of rule 1501:13-9-04 of the Administrative Code.

- (1) In addition to the quality and quantity parameters required for quarterly monitoring and NPDES monitoring, will any other parameters be monitored?
_____ Yes, X No. If "yes," indicate the parameter(s) and the site(s) where such monitoring will occur.
- (2) Do you propose or anticipate the need for a variation in the required monitoring frequency for ground and surface water sites and monthly monitoring for NPDES?
_____ Yes, X No. If "yes," describe the variation in frequency and the monitoring sites to be affected.
- (3) Describe the plan for collection, recording, and reporting of all surface and ground water quality and quantity monitoring data, including data collected for the NPDES program.

GROUND AND SURFACE WATER WILL BE MONITORED PRIOR TO REFUSE DISPOSAL AND, WHERE NECESSARY, DURING AND AFTER FINAL ABANDONMENT OF THE SITE. QUALITY AND QUANTITY INFORMATION WILL BE OBTAINED FROM STATIONS U6-1, DS6-7, AS WELL AS MONITORING WELLS, AND REPORTED QUARTERLY TO THE DIV. OF MINES & RECLAMATION. SURFACE WATER WILL BE MONITORED IN ACCORDANCE WITH NPDES REQUIREMENTS. THE POND WILL BE MONITORED DAILY FOR FLOW, ALL OTHER FACTORS ONCE EVERY TWO WEEKS. ANALYTICAL RESULTS AND FLOW DATA WILL BE REPORTED MONTHLY TO THE EPA. THE OHIO EPA WILL RECEIVE THE WHITE COPY, ALL OTHER COPIES WILL BE SENT TO ODNR, DIVISION OF MINES AND RECLAMATION, APPROPRIATE DISTRICT OFFICE. QUARTERLY MONITORING REPORTS WILL BE SUBMITTED FOR APPROVED MONITORING SITES (COPY ATTACHED) TO THE DIVISION OF MINES AND RECLAMATION, APPROPRIATE DISTRICT OFFICE. OHIO EPA REPORTS WILL BE SUBMITTED FOR MONTHLY POND MONITORING (COPY ATTACHED) TO THE DIVISION OF MINES & RECLAMATION, APPROPRIATE DISTRICT OFFICE.

ALSO SEE P.T.I., ENGINEERING REPORT, PAGE 18, ITEM 8.1, AND THE PHASE II HYDROGEOLOGIC INVESTIGATION REPORT FOR DETAILED MONITORING PLAN.

ADDENDUM TO PART 2, PAGE 26, ITEM E (1 - 3)
THE OHIO VALLEY COAL COMPANY

E (1). Disturbance to the hydrologic balance will be minimized through the use of the following: clay liner, underdrain system to convey groundwater beneath the refuse fill from the project, a three-foot thick minimum clay liner to separate the existing ground surface from the coal refuse, a leachate collection system to isolate and convey leachate to ponds for treatment, if necessary, prior to discharge to State waters, sedimentation ponds, diversion ditches lined with riprap or grass, and final clay cap, two-feet thick minimum, and cover system.

Temporary erosion and sediment control measures used during construction will include hay bales, silt fence and seeding.

Permanent erosion and control facilities include drainage ditches and sedimentation ponds. These structures will be maintained throughout the life of the facility to insure they function properly.

All drainage from disturbed areas will be controlled and directed to sedimentation ponds at all times during operations. Waters from the site will be treated as required prior to discharge.

E (2). Rights of present groundwater users will be respected and protected by the measures described in Items E 1 and E 3. Should any contamination, diminution, or interruption occur an alternate source will be provided.

E (3). Prior to refuse placement, a three-foot thick re-compacted clay liner will be installed to protect the groundwater. During the operations phase, acid drainage will be avoided by prompt and careful reclamation to minimize oxidation of toxic strata or fill. The active refuse fill surface will be graded to shed storm waters and prevent accumulation. Leachate from the refuse surface and that percolating through the refuse fill will be kept isolated from surrounding waters. The leachate will be collected in ditches or trenches and flow by gravity to ponds. These waters will be treated if necessary prior to discharge. Upon completion, the site will be covered with two-feet of re-compacted clay, eighteen-inches of inert earthen material and six-inches of soil suitable for vegetation growth. The completed site will be graded for proper surface drainage to inhibit infiltration and therefore the possible formation of acid waters.

Acid drainage is not expected to be a problem at this site with proper construction and maintenance of the facilities as planned.

ADDENDUM TO PART 3, ITEM F(3)
THE OHIO VALLEY COAL COMPANY
OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

Quarterly Monitoring Report Sheet
(Submit in Quadruplicate)

Permittee _____, Permit Number _____
 _____ 1st Qtr., _____ 2nd Qtr., _____ 3rd Qtr., _____ 4th Qtr., (✓ appropriate blank)
 _____ Pre-mining, _____ Mining, _____ Postmining, (✓ appropriate blank for mine status)

Monitoring Site ID No. (e.g. S-1, W-3)					
State Plane X-Y Coordinates	X _____ Y _____	X _____ Y _____	X _____ Y _____	X _____ Y _____	X _____ Y _____
Surface Elevation of Monitoring Site					
Indicate Whether Site was Monitored for Quality, Quantity, or Both					
Depth of Well Below Land Surface (feet)					
Static Water Level of Well Below Land Surface (feet)					
Stream or Spring Discharge (cfs or gpm)					
Date Measured					
pH (Standard Units)					
Total Acidity (mg/l CaCO ₃)					
Total Alkalinity (mg/l CaCO ₃)					
Total Iron (mg/l)					
Total Manganese (mg/l)					
Total Suspended Solids (mg/l)					
Total Hardness (mg/l CaCO ₃)					
Total Sulfates (mg/l)					
Specific Conductance (at 25° C in μ mhos/cm)					

Permittee's Signature

Date

Laboratory Name

Analyst's Signature

Date

TOVCC 14036

OHIO DEPARTMENT OF
NATURAL RESOURCES

Ohio Environmental Protection Agency

COMPANY NAME		
MINE LOCATION	COUNTY	TOWNSHIP
SECTION		PIT IDENTIFICATION (IF ANY)

DATE (Mo. Yr.)	Page of Page				
OEPA PERMIT NO.	IP				
ODNR PERMIT NO.					

[illegible]

NOTE: NUMBER OUTFALL AS NEEDED.
ADDITIONAL REMARKS:

AH REPORTING CODES MUST BE EXPLAINED
 THIS FORM MUST BE TYPED

Discharge of pollutants to waters of the state without an effective permit is prohibited pursuant to 6111.04 and 6111.07 Ohio Revised Code.

DATE REPORT COMPLETED

SIGNATURE OF REPORTER

TITLE OF REPORTER

TOVCC 14037

G. DIVERSIONS AND DRAINAGE CONTROLS-Permit Area

- (1) Will the proposed coal mining activities result in diversions of overland flow away from the disturbed areas? _____ Yes, X No. If "yes," describe, including maps and cross sections, the diversion to be constructed to achieve compliance with paragraph (I) of rule 1501:13-4-14 of the Administrative Code.
- (2) Will the proposed coal mining activities result in the diversion of intermittent or perennial streams within the proposed permit area? X Yes, _____ No. If "yes," describe, including maps and cross sections, the diversions to be constructed to achieve compliance with paragraph (I) of rule 1501:13-4-14 of the Administrative Code.
- (3) Will the proposed coal mining activities result in construction of diversions to direct runoff through a sediment pond or a series of sediment ponds? X Yes, _____ No. If "yes," submit an addendum to describe, including maps and cross sections, the diversions to be constructed to achieve compliance with paragraph (I) of rule 1501:13-4-14 of the Administrative Code.

SEE P.T.I., ENGINEERING REPORT, APPENDIX I

- (4) Indicate which of the following are proposed to be constructed within the proposed permit area and submit as an addendum the detailed design plans for each structure in accordance with paragraph (H) of rule 1501:13-4-14 and 1501:13-9-04 of the Administrative Code.

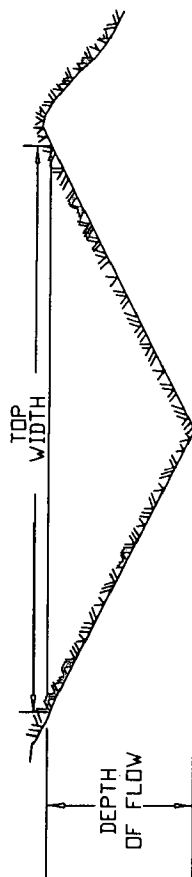
_____ sedimentation pond(s) (submit Attachment 20)
_____ water impoundment(s) (submit Attachment 20)
_____ Other (specify) _____
- (5) Submit an addendum describing the plan for the control of water drainage into, through, and out of the proposed permit area. If applicable, submit as an addendum any request for variances pursuant to paragraphs (B) and (E) of rule 1501:13-9-04 of the Administrative Code.

SEE P.T.I., ENGINEERING REPORT, APPENDIX VIII AND ADDENDUM TO PART 3, PAGE 27, ITEM G(5), AND BZVR.

- (6) Describe the treatment, when required, of ground and surface water drainage from the area to be disturbed by the proposed coal mining activities.

ALL WATER DISCHARGING FROM THE PERMIT WILL MEET THE EFFLUENT LIMITATIONS AS OUTLINED ON THE ADDENDUM. SEE ADDENDUM TO PART 3, ITEM G(6). TREATMENT CHEMICALS USED ARE SODA ASH, SULPHURIC ACID FOR pH ADJUSTMENT, AND NALCO 7883 POLYMER BASED FLOXULANT.

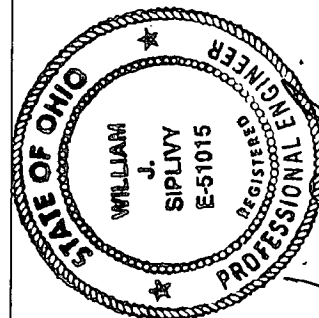
DIVERSION DITCH	DIVERSION DITCH LENGTH	DRAINAGE AREA (ACRES)	STORM DESIGN	DESIGN CFS	SLOPE	SIDE SLOPES	DEPTH OF FLOW (MAXIMUM)	TOP WIDTH	VELOCITY FT/SEC (MAXIMUM)	CHANNEL LINING
DD-A	2525'	40.5	10YR/6HR	45.1	1.2%	2:1	3.0'	12.0'	4.4	GRASS
DD-B	2940'	31.5	10YR/6HR	32.4	1.2%	2:1	2.8'	11.2'	3.9	GRASS



TRIANGULAR CHANNEL

NOTES:

- 1 COMPUTER PROGRAM USED: SEDCAD+
CURVE NUMBER: 88
RAINFALL 10YR/6HR: 2.8"
- 2 DIVERSIONS WILL BE STABILIZED WITH RIPRAP AT ANY TRANSITION ZONES WHERE VELOCITIES EXCEED THE LIMITING VELOCITY.



ADDENDUM TO PART 3, PAGE 27, ITEM G(3)
THE OHIO VALLEY COAL COMPANY D-0360-8

DIVERSION DITCH DESIGN COMPUTATION SHEET


SECTIONS: 29 & 35 TOWNSHIP: 5 RANGE: 4
TOWNSHIP: WASHINGTON COUNTY: BELMONT
DATE PERAPED: 05/06/99 JOB#: 469-21

ADDENDUM TO PART 3, PAGE 27, ITEM G(4)

THE OHIO VALLEY COAL COMPANY

SEDIMENT PONDS 013 AND 014 LOCATED ON D-0360 AND SHOWN ON THE ENCLOSED ADJACENT AREA PERMIT APPLICATION MAP WILL BE USED TO CONTROL SEDIMENT. THE ATTACHMENT 20'S AND ADDENDA WERE SUBMITTED WITH AN APPLICATION TO REVISE D-0360 AND ARE ALSO INCLUDED IN THE ATTACHED P.T.I., APPENDIX 8.

THE EXISTING REFUSE DISPOSAL SITE HAS ADEQUATE STORAGE TO HANDLE SEDIMENT FROM THE BORROW AREAS WHICH CONTAIN 129.4 ACRES AND ARE LOCATED ABOVE THE EXISTING REFUSE DISPOSAL AREA.


WILLIAM J. SIPPLIVY, P.E., C.P.G.

ADDENDUM TO PART 3, PAGE 27, ITEM G(5)
STREAM BUFFER ZONE VARIANCE REQUEST
THE OHIO VALLEY COAL COMPANY

CHIEF
DIVISION OF MINES AND RECLAMATION
1855 FOUNTAIN SQUARE COURT
COLUMBUS, OHIO 43224

RE: BUFFER ZONE VARIANCE REQUEST

Dear Chief,

The Ohio Valley Coal Company is hereby requesting a variance to conduct refuse disposal operations within the buffer zone of unnamed intermittent streams as shown on the permit application map.

SPECIFIC ACTIVITIES:

Unnamed Streams "A", "B" AND "G"

Activities within the 100 foot buffer zones of unnamed intermittent Streams "A", "B" and "G" will consist of the installation of a foundation drain (see P.T.I., Exhibit 1-9) in the existing stream channels and a coal refuse fill above the foundation drain as shown on the enclosed Adjacent Area Application Map. The entire lengths of these streams will be affected from the head of the hollow to where it enters Perkins Run. The coarse coal refuse fill will remain permanent.

Existing conditions in Streams "A", "B", and "G" consists of a substrate of cobble, sand, and bedrock originating from limestone, sandstone, and shale. Silt content is normal to moderate, with moderate embeddedness. Instream cover is generally sparse and consists of shallows, boulders, logs and woody debris. Channel morphology exhibits low sinuosity, poor development, no channelization, and high stability. Riparian width is very narrow to none, with a forested floodplain. Bank erosion is little to moderate on the right bank, and ranges from little to heavy on the left bank. Pool/glide and riffle/run quality has a maximum depth of <0.4 meters, pool width is more than riffle width, with moderate to slow velocities. Riffle/run substrate is stable cobble/boulder with low embeddedness.

Streams "A", "B", and "G" have been impacted as a result of its former agricultural use. Currently, these streams have no known use.

Unnamed Stream "C"

Activities to be conducted within the 100 foot buffer zone of Stream "C" located within the borrow area consists of removing clays for borrow as needed to facilitate the existing and proposed coal refuse disposal areas. Grading and blending of soils will occur within the buffer zone of this stream.

For purposes of this description, Stream "C" flows in a southwesterly direction, the upper most 440 feet of the stream buffer zone will be disturbed, however, the stream channel will not be disturbed.

Existing conditions in Stream "C" consists of a substrate of sand and bedrock of sandstone and shale origin. Silt cover is moderate with moderate embeddedness. Instream cover is generally sparse and consists of shallows and boulders. Channel morphology exhibits low sinuosity, poor development, no channelization, and high stability. Riparian width is none, with a forested floodplain and no bank erosion. Pool/glide and riffle/run quality have a maximum depth of less than 0.2 meters. Pool width is more than riffle width with slow velocity. Riffle/run substrate is stable with low embeddedness.

Stream "C" has been affected downstream by coal refuse disposal.

The duration of activities within the buffer zone of Stream "C" will be approximately one year. Disturbance of this buffer zone will not occur for approximately 10 years, or at the time of final capping and abandonment of the existing and proposed coal refuse disposal areas.

Measures to be taken to protect or minimize impacts to Stream "C" during soil disturbance within the buffer zone located within the borrow area, will consist of silt fence and/or straw bales, and if necessary, sumps will be utilized to trap sediment. Grading and seeding of the disturbed area will be done in a timely manner during the first appropriate season.

Unnamed Stream "D"

Activities to be conducted within the 100 foot buffer zone of Stream "D" consists of removing clays for borrow as needed to facilitate the existing and proposed coal refuse disposal areas. Grading and blending will occur within the buffer zone of this stream.

For purposes of this description, Stream "D" flows 130 feet until it intersects Stream "C" in a southeasterly direction from head of hollow. Approximately 180' of the buffer zone will be disturbed. The stream channel will not be disturbed.

Existing conditions in Stream "D" consists of a substrate of sand and bedrock of sandstone and shale origin. Silt cover is moderate with moderate embeddedness. Instream cover is generally sparse and consists of shallows and boulders. Channel morphology exhibits low sinuosity, poor development, no channelization, and high stability. Riparian width is none, with a forested floodplain and no bank erosion. Pool/glide and riffle/run quality have a maximum depth of less than 0.2 meters. Pool width is more than riffle width with slow velocity. Riffle/run substrate is stable with low embeddedness.

Stream "D" has been affected downstream by coal refuse disposal.

The duration of activities within the buffer zone of Stream "D" will be approximately one year. Disturbance of this buffer zone will not occur for approximately 10 years, or at the time of final capping and abandonment of the existing and proposed coal refuse disposal areas.

Measures to be taken to protect or minimize impacts to Stream "D" during soil disturbance within the buffer zone located within the borrow area, will consist of silt fence and/or straw bales, and if necessary, sumps will be utilized to trap sediment. Grading and seeding of the disturbed area will be done in a timely manner during the first appropriate season.

Unnamed Stream "E"

Activities to be conducted within the 100 foot buffer zone of Stream "E" consists of removing clay for borrow as needed to facilitate the proposed and existing coal refuse disposal areas. Grading and blending will occur within the buffer zone of this stream, however, the stream channel will not be disturbed.

For purposes of this description, Stream "E" flows in a southwesterly direction from head of hollow. Approximately 340' of the buffer zone may be disturbed, however, the stream channel will not be disturbed.

Existing conditions in Stream "E" consists of a substrate of sand and bedrock of sandstone and shale origin. Silt cover is moderate with moderate embeddedness. Instream cover is generally sparse and consists of shallows and boulders. Channel morphology exhibits low sinuosity, poor development, no channelization, and high stability. Riparian width is none, with a forested floodplain and no bank erosion. Pool/glide and riffle/run quality have a maximum depth of less than 0.2 meters. Pool width is more than riffle width with slow velocity. Riffle/run substrate is stable with low embeddedness.

Stream "E" has been affected downstream by coal refuse disposal.

The duration of activities within the buffer zone of Stream "E" will be approximately one year. Disturbance of this buffer zone will not occur for approximately 10 years, or at the time of final capping and abandonment of the proposed and existing coal refuse disposal areas.

Measures to be taken to protect or minimize impacts to Stream "E" during soil disturbance within the buffer zone located within the borrow area, will consist of silt fence and/or straw bales, and if necessary, sumps will be utilized to trap sediment. Grading and seeding of the disturbed area will be done in a timely manner during the first appropriate season.

Unnamed Stream "F"

Activities to be conducted within the 100 foot buffer zone of Stream "F" consists of removing clays for borrow as needed to facilitate the proposed and existing coal refuse disposal areas. Grading and blending will occur within the buffer zone of this stream, however, the Stream channel will not be disturbed.

For purposes of this description, Stream "F" flows in a southeasterly direction from head of hollow. The stream follows the northerly permit line for a distance of 300 feet. Approximately 490 feet of the stream buffer zone will be affected.

Existing conditions in Stream "F" consists of a substrate of sand and bedrock of sandstone and shale origin. Silt cover is moderate with moderate embeddedness. Instream cover is generally sparse and consists of shallows and boulders. Channel morphology exhibits low sinuosity, poor development, no channelization, and high stability. Riparian width is none, with a floodplain of forested pasture and no bank erosion. Pool/glide and riffle/run quality have a maximum depth of less than 0.2 meters. Pool width is more than riffle width with slow velocity. Riffle/run substrate is stable with low embeddedness.

Stream "F" has been affected downstream by coal refuse disposal.

The duration of activities within the buffer zone of Stream "F" will be approximately one year. Disturbance of this buffer zone will not occur for approximately 10 years, or at the time of final capping and abandonment of the existing and proposed coal refuse disposal areas.

Measures to be taken to protect or minimize impacts to Stream "F" during soil disturbance within the buffer zone located within the borrow area, will consist of silt fence and/or straw bales, and if necessary, sumps will be utilized to trap sediment. Grading and seeding of the disturbed area will be done in a timely manner during the first appropriate season.

Perkins Run

Activities within the 100 foot buffer zones of Perkins Run will consist of the installation of a foundation underdrain in the existing stream, a coal refuse fill above the foundation underdrain, construction of diversion ditches, and the construction of Pond 013.

Existing conditions in Perkins Run consist of a substrate of cobble, sand, and bedrock originating from limestone, sandstone, and shale. Silt content is normal to moderate, with moderate embeddedness. Instream cover is generally sparse and consists of shallows, boulders, logs and woody debris. Channel morphology exhibits low sinuosity, poor development, no channelization, and high stability. Riparian width is very narrow to none, with a forested floodplain. Bank erosion is little to moderate on the right bank, and ranges from little to heavy on the left bank. Pool/glide and riffle/run quality has a maximum depth of <0.4 meters, pool width is more than riffle width, with moderate to slow velocities. Riffle/run substrate is stable cobble/boulder with low embeddedness.

For purposes of description, Perkins Run flows in a southeasterly direction within the current limits of Permit D-0360, and is carried in underdrains beneath the existing refuse disposal area. Perkins Run currently discharges from beneath the toe of the existing No. 2 Dam structure. The foundation drain will be extended approximately 1600 feet downstream from the No. 2 dam. An additional approximate 400 feet of rock rip-rap channel will be installed to allow drainage of the underdrain to enter Pond 013. Pond 013 will occupy approximately 250 feet of stream channel, a width of approximately 60 feet on either side of the stream channel.

Perkins Run has been previously affected upstream by coal refuse disposal activities.

The duration of activities within the buffer zone of Perkins Run will be approximately 10 years or the life of the current and proposed coal refuse disposal areas.

Measures taken to protect Perkins Run during construction of the above referenced facilities are outlined throughout the P.T.I. and Design Engineers Report.

NECESSITY FOR ACTIVITIES:

The Ohio Valley Coal Company cleans coal for use by the electric utility industry. Coal refuse is produced at the rate of approximately 156250 tons per month. The existing refuse disposal area is nearly filled to capacity, therefore a new area must be developed and additional borrow area is needed.

Currently, there are no economically viable ways to dispose of coal refuse. Mountain top disposal areas have been investigated as have refuse piles in flat land areas. These alternatives do not present any environmental advantages and hold a potential for more unsightly conditions after reclamations.

Other disposal sites were considered on areas owned by The Ohio Valley Coal Company remote from the existing disposal area. These sites were eliminated from consideration for several reasons. They would require haulage of refuse along township or county roads. This would create the potential for pollution of streams away from the permit as well as refuse dropping from the haulage vehicles onto the public roads. The construction of the disposal area would require an entirely new and separate system of pollution controls whereas the main pollution controls for the proposed site are in existence already.

WATER QUALITY/QUANTITY AND ENVIRONMENTAL RESOURCES:

Water quality in the affected streams is generally fair. Acceptable levels of manganese, sulfates and iron are present in all six monthly samples at four sampling stations. In six months sampling, average flows in stream "A" range from 0.5 cfs to 0.002 cfs. Average flows in stream "B" range from 0.02 GPM to dry. Average flows in stream "G" range from 16 GPM to 0.13 G.P.M. These streams and any contributing springs will be collected, directed through the foundation drain and carried by properly designed culverts and ditches to sediment ponds when needed. Water in the pond will be monitored and treated as required to meet requirements of the N.P.D.E.S. permit before being released to the receiving stream. Undisturbed streams exist on areas adjacent to the disposal area.

Water quality in borrow areas is generally fair. Acceptable levels of manganese, sulfates and iron are present in all six monthly samples at four sampling stations. In six months sampling, average flows in stream "C" range from 0.02 cfs to 0.002 cfs. Average flows in stream "D" range from 0.06 cfs to 0.004 cfs. Average flows in stream "E" range from 0.09 cfs to 0.008 cfs. Average flows in stream "F" range from 0.03 cfs to 0.0003 cfs. The stream channels of unnamed streams "C", "D", "E" and "F" will not be disturbed.

Water quality in Perkins Run is generally fair. Acceptable levels of manganese, sulfates and iron are present in all six monthly samples at upstream and downstream sampling stations. In six months sampling, average flows in Perkins Run range from 0.02 cfs upstream to 194 cfs downstream.

Riparian vegetation within the stream channels consist of typical plant life, while the buffer zones are forested or forested pasture with shrubs, small trees and hardwoods.

There are numerous wooded areas and streams surrounding the site on land which is owned by The Ohio Valley Coal Company which will provide wildlife habitat and travel corridors until the site is reclaimed

Topsoil will be stripped and stock piled on the site. It will be preserved and placed back over the area during reclamation.

An Ohio E.P.A. 401 certification application was submitted on June 15, 1998. Approval is pending. Upon receipt of the 401 certification, the 404 permit will be obtained from the Army Corp of Engineers.

SEQUENCING OF OPERATIONS

The total life of this coarse coal refuse facility is projected to be approximately 10 years. The sequence of proposed activities is as follows:

- 1) Construction of Sedimentation Ponds
- 2) Installation of diversion ditches

- 3) Topsoil removal and stock piling
- 4) Construction of ground water collection drain
- 5) Fill area clay liner (from borrow areas)
- 6) Construction of leachate collection system
- 7) Refuse placement, seal/cap, and revegetation

STREAM RECONSTRUCTION, DIVERSION OR RELOCATION:

No stream reconstructions or relocations are planned for this project. All stream and buffer zone affects as well as sequencing of operations, are discussed in the previous sections of this document.

REVEGETATION:

The following species and amounts of vegetation and/or trees and shrubs will be planted a minimum of two and ½ times the channel bottom width where any disturbance within the buffer zones has occurred:

<u>SPECIES</u>	<u>AMOUNT/RATE</u>	
(Grasses & Legumes)		
Perennial Ryegrass	5 lbs/ac.	
Foxtail Millet	5 lbs/ac.	
Red Top	3 lbs/ac.	
Birdsfoot Trefoil	5 lbs/ac.	
Appalow Lespedeza	15 lbs/ac.	
(Trees & Shrubs)		
	<u>SPACING</u>	<u>PER ACRE</u>
Green Ash	8' X 8'	681
Sycamore	Trees and shrubs will be planted by hand	
Button Bush		

Trees and shrubs will be planted by hand on approximate 8 foot centers. Areas planted with riparian vegetation will not be cut or mowed as to encourage the development of volunteer vegetation. Species of trees, shrubs, grasses, and legumes which appear naturally will not be removed, but will remain to enhance the wildlife environment along the streams.

The riparian width within Streams "C", "D", "E", and "F" is zero, the forested buffer zone extends to the edge of the stream banks. Note: In the event that disturbance within the borrow areas does not encroach within 100 feet of the stream channel, restoration of riparian vegetation will not be necessary.

Care will be taken to disturb only that portion of the buffer zone necessary to accomplish the objectives of this permit. All work within the stream buffer zone will be performed in timely and workmanlike manner to prohibit as best as can be accomplished, detrimental affects to the stream.

Sincerely,

Ellen M. Soper

ADDENDUM TO PART 3, PAGE 27, ITEM G(5),
THE OHIO VALLEY COAL COMPANY

Sediment Pond 013 will be used to control runoff for Phase 1, or the first two years of the disposal operation. Sediment Pond 014 will then be constructed to control runoff from the remaining disposal area. Runoff will be directed to Pond 014 by diversion ditches as shown on the enclosed plans, Drawing No. 3.

Drainage from the north borrow areas will flow naturally to the existing slurry impoundment. Sediment from the east knob borrow area and borrow areas adjacent to the emergency spillway will flow to Pond 013 during Phase 1. When Phase 1 is complete, sediment from east knob and areas adjacent to the emergency spillway will flow to Pond 014. Underdrains collect natural, unaffected drainage, are located beneath a three foot thick clay liner, and does not come in contact with the coal refuse material. A Small Area Drainage Exemption is not applicable to this drainage as it would include the entire existing and proposed refuse disposal areas, under which the origin of all underdrain drainage originates. Drainage from the underdrains beneath the refuse disposal area will not pass through Sediment Pond 013, and will become surface drainage upon exiting from beneath the refuse material. See Drawing 9 of the plans.

All drainage from the leachate collection system will pass through Pond 013. Leachate consists of all water that comes in contact with the coal refuse. The leachate collection system is located above the three foot thick clay liner. See Drawings 10 and 11.

(NEW SOURCE PERFORMANCE STANDARDS)

FINAL EFFLUENT LIMITATIONS
EFFECTIVE AFTER JUNE 3, 1997

	pH	T.S.S. in mg/l 30 Day/Daily	Fe in mg/l 30 Day/Daily	Mn in mg/l 30 Day/Daily	S.S. in ml/l
1. Discharge from underground workings of underground mines - not commingled	6.5-9.0	35.0 / 70.0	1.4 / 6.0	2.0 / 4.0	
2. Discharge from underground workings of underground mines - commingled					
a) less than or equal to 10 Yr/24 Hr	6.5-9.0	35.0 / 70.0	1.4 / 6.0	2.0 / 4.0	
b) greater than 10 Yr/24 Hr	6.5-9.0				
3. Controlled surface mine drainage					
a) less than or equal to 10 Yr/24 Hr	6.5-9.0	35.0 / 70.0	1.4 / 6.0	2.0 / 4.0	
b) greater than 10 Yr/24 Hr	6.5-9.0				
4. Non-controlled surface mine drainage (except steep slope and mountaintop removal)					
a) no precipitation 24 Hr.	6.5-9.0	35.0 / 70.0	1.4 / 6.0	2.0 / 4.0	
b) less than 2 Yr/24 Hr	6.5-9.0		1.4 / 7.0		0.5
c) greater than 2 Yr/24 Hr less than or equal to 10 Yr/24 Hr	6.5-9.0		1.4 /		0.5
d) greater than 10 Yr/24 Hr	6.5-9.0				
5. Discharge from coal refuse disposal piles					
a) less than or equal to 1 Yr/24 Hr	6.5-9.0	35.0 / 70.0	3.0 / 6.0	2.0 / 4.0	
b) greater than 1 Yr/24 Hr less than or equal to 10 Yr/24 Hr	6.5-9.0				0.5
c) greater than 10 Yr/24 Hr	6.5-9.0				
6. Discharge from steep slope and mountaintop removal area					
a) no precipitation 24 Hr.	6.5-9.0	35.0 / 70.0	1.4 / 6.0	2.0 / 4.0	
b) less than 10 Yr/24 Hr	6.5-9.0		1.4 /		0.5
c) greater than 10 Yr/24 Hr	6.5-9.0				
7. Discharges from preparation plant associated areas (excluding coal refuse piles) and preparation plants					
a) no precipitation 24 Hr.	6.5-9.0	35.0 / 70.0	1.4 / 6.0	2.0 / 4.0	
b) less than 10 Yr/24 Hr	6.5-9.0				0.5
c) greater than 10 Yr/24 Hr	6.5-9.0				
8. Discharges from Reclamation Areas					
a) less than 10 Yr/24 Hr	6.5-9.0				0.5
b) greater than 10 Yr/24 Hr	6.5-9.0				

H. PROTECTION OF PUBLIC PARKS AND HISTORIC PLACES-Permit and Planned Subsidence Area

Will the proposed coal mining activities adversely affect any public park and places listed on the National Register of Historic Places? _____ Yes, X No. If "yes," submit an addendum describing the measures to minimize or prevent these impacts.

I. MINING NEAR OR THROUGH A PUBLIC ROAD-Permit Area

If the response to Part 1, item D (6) of the permit application is "yes", submit an addendum describing the measures to be used to ensure that the interests of the public and landowners are protected.

J. SUBSIDENCE CONTROL SURVEY-Shadow Area

- (1) Is this a full coal recovery operation?
_____ Yes, _____ No. If "yes," complete Attachment 31, Subsidence Control Survey, and following items J(2) and (3).
- (2) Does the shadow area contain any of the structures or facilities listed in 1501:13-12-03(J) (1-3)?
_____ Yes, _____ No. If "yes," complete Attachment 32, Protection of Specific Structures, and specifically identify the structures or facilities on the application map.
- (3) Are any aquifers or bodies of water that serve as a significant water source for any public water supply system present in the shadow area?
_____ Yes, _____ No. If "yes," complete Attachment 32, Protection of Specific Structures, and specifically identify the areas on the application map.

K. SUBSIDENCE CONTROL PLAN-Shadow Area

- (1) Submit an addendum which describes the method of coal removal, and indicates the size, sequence, and timing of the development of the underground workings.
- (2) Utilizing the application map, specifically indicate areas where planned subsidence mining methods (i.e. longwall or pillar extraction) will be used.
- (3) Utilizing the application map, specifically indicate room-and-pillar mining areas where subsidence will be prevented or minimized.

PART 4 FORMAT AND CONTENT

A. FILING OF ADDENDA **

If an addendum is needed to present the information required by the items in the permit application, the addendum is to be submitted with the permit application and each page, map, plan or other document in the addendum should include the applicant's name and indicate to what item the addendum applies. For example, "Addendum to Part 3, item K(2) Zebco Coal Company."

B. Provide the information requested below for all technical data submitted in the application.

Identification of Technical Data (1)	Person/Organization that Collected Data and Date	Methodology for Collecting Data	Person/Organization that Analyzed Data and Date	Methodology Used to Analyze Data
PART 2, ITEM C ATTACHMENT 14A	F. BLACKMAN, QUALITY ENVIRONMENTAL SERVICES, INC. 1/98, 2/98, 3/98	GRAB SAMPLES AND INTERVIEWING	SHARON DUKE TRADET, INC. 1/98, 2/98, 3/98	ANALYZE AS NECESSARY FOR PARAMETERS.
ATTACHMENT 28	D. BARTCH, THE OHIO VALLEY COAL COMPANY 1/98	GRAB SAMPLES	SHARON DUKE TRADET, INC. 1/98	ANALYZE AS NECESSARY FOR PARAMETERS.

(1) The technical data is to be identified by referencing the particular item in the application for which the data was used in preparing the response (e.g. Part 2, B(1); Attachment 14; Part 4, A).

C. Provide the name, address, and position of officials of each private or academic research organization or governmental agency contacted in the preparation of the application for information on land uses, soils, geology, vegetation, fish and wildlife, water quantity and quality, air quality, and archeological, cultural, and historic features.

Name and Address of Official	Position of Official	Name of Agency/ Organization	Type of Information (e.g. Geology)
CHRISTINE A. STRAUB FOUNTAIN SQUARE, BLDG. E, COLUMBUS, OHIO 43224	HYDROGEOLOGIST	DIV. OF WATER	HYDROLOGY
SHARON DUKE P.O. BOX 2019 WHEELING, WV. 26003	ANALYST	TRADET, INC.	HYDROLOGY, REFUSE ANALYSIS
JIM FORSHEY 1119 EAST MAIN ST. BARNESVILLE, OH 43713	DISTRICT CONSERVATIONIST	NATURAL RESOURCES CONSERVATION SERVICES	SOILS/PRIME FARM LAND
ARTHUR NIX 6121 HUNTLEY ROAD COLUMBUS, OH 43229	MANAGER GEOTECHNICAL DEPT	DODSON- STILSON, INC.	STABILITY ANALYSIS AND DESIGN
JIM C. SMITH 1234 S. CLEVELAND- MASS. ROAD AKRON, OH 44321	MANAGER - GEOLOGICAL SERVICES	R & R INTERNATIONAL, INC.	GEOTECHNICAL

D. APPLICATION FOR ABANDONED MINED LAND DIRECT NEGOTIATED CONTRACT
(IF APPLICABLE) N/A

In accordance with Section 1513.27 of the Ohio Revised Code, the chief of the Division of Reclamation has been granted the authority to enter into contracts with licensed operators for reclamation of abandoned mined lands affected by coal mining prior to April 10, 1972 and located adjacent to a permit area. To be eligible for reclamation funding, the abandoned mined land must be causing offsite environmental problems, will not be affected by the operator during the normal course of mining, and is not likely to be mined in the foreseeable future. If such lands exist adjacent to your permit area and you are interested in contracting for reclamation of the lands, complete this application, detach and send directly to:

Robert S. Baker, Manager
Mined Land Reclamation
Division of Reclamation
Fountain Square, H-2
Columbus, Ohio 43224

Upon receipt, a representative from the Mined Land Reclamation section will contact you.

Applicant: _____

Address: _____

City: _____ State _____ Zip _____

Business Telephone: _____

Contact Person: _____

Description of Abandoned Mined Land:

County: _____

Township: _____

Section/Lot: _____

Approximate Acreage: _____

Environmental problems associated with site:

